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FULGOROIDEA FROM SOUTHERN CHINA

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This report deals with three collections of insects from China. The largest of these, comprising 241 specimens, was made by Dr. J. L. Gressitt in Szechuan and western Hupeh; the second (201 specimens) was made by Mrs. D. E. Wright in Chekiang, mainly in the neighborhood of Mokansan; the third (156 specimens) of material from other areas, chiefly in Kwangtung and around Hong-Kong, was made by various staff members of Lingnan University, including, in addition to the foregoing, W. E. Hoffman and E. R. Tinkham. The whole of the material, including all type specimens, has been returned to the California Academy of Sciences.

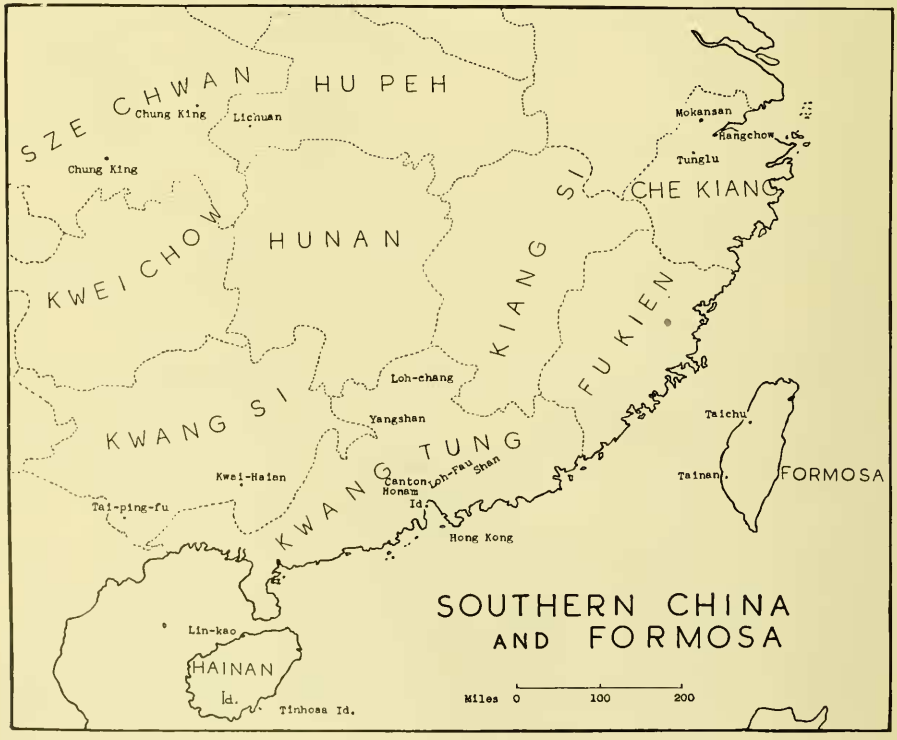
The writer tenders his warmest thanks to Dr. Edward S. Ross, curator of the insect collection of the Academy of Sciences, and to Dr. J. L. Gressitt for the privilege of studying this material. He also pays a well-merited tribute to the collectors whose personal efforts have made such a useful sample of this little-known fauna available for taxonomic study.

Collections of Chinese fulgoroid homoptera are too small and too scattered, and reports on them too insufficiently detailed, to afford adequate opportunity for any careful study of speciation in this important zoogeographical area. The object of the present report, therefore, has been limited to presenting the data in a usable manner; little attempt has been made to collate existing records, or to review and analyze the fauna.

Many facts of interest have emerged from a study of the present collections: the first record of *Ptoleria* in Asia north of the Himalayas; the substantial extension of the known distribution of *Nesopompe tsoui* Muir westward to Hupeh and northeastward to Japan; the establishment of new western limits for the distribution of *Kinnara fumata* (Mel.), *Los-*

bañosia bakeri Muir, *Diostrombus politus* Uhl., *Zoraida kirkaldyi* Muir, *Pamendanga sauteri* Muir, and *Megatropis formosana* (Mats.); of a new eastern limit for *Kamendaka nigromaculata* (Dist.), and a new northern limit for *Viraha facialis* (Dist.). Two informative captures were those of *Caristianus ulysses* Fenn. and *Ommatissus lofouensis* Muir. The record of the former, described from Bornean material, in Yunnan, has not only extended the known range of this species, but has strengthened the case for assigning a new species of achilid, taken in the same general area, to *Zathauma,* a hitherto monobasic genus known only from Borneo. The identification of *Ommatissus lofouensis* has served to corroborate the accuracy of Muir's generic assignment, which was doubted by Melichar (1914: 214).

In general the fulgoroid fauna of south and southwestern China appears to be made up of generic elements of the palaearctic fauna mixed with others from the Burman, Indochinese, and Indonesian faunas. This was noted by Noualhier (1896: 251), and there is little more to be said on this point today. An interesting consideration has been brought to the front by the known great antiquity of the conifer *Metasequoia glyptostroboides.* A new achilid species, assigned below to *Magadha* Distant, is associated, probably rather loosely, with this tree, and, as is general in the family,



undoubtedly spends its nymphal life below bark and inside crevices of rotting branches and tree trunks. The genus *Magadha* was described from northern India and is represented in Ceylon, Assam, and Formosa. It is clearly headquartered in southeastern Asia, and there appears to be no obvious reason why species of this genus, both in the nymphal and adult stages, should not have been associated with *Metasequoia* through an appreciable length of geological time.

Family **CIXIIDAE** Spinola

KEY TO GENERA OF CHINESE CIXIIDAE

(Adapted from Muir)

(1) (2) A subantennal process present on genae ..... *Borysthenes* Stål

(2) (1) No subantennal process ..... (3)

(3) (4) Sc, R, and M in tegmina arising separately from base, not forming a common stalk ..... *Andes* Stål

(4) (3) Sc, R, and M not arising separately from basal cell, two or more united in a common stalk ..... (5)

(5) (6) Tegmina in repose steeply tectiform, with apical margins meeting or nearly so, body laterally compressed. Ovipositor with valvulae prominent, more or less ensiform, curved, often accommodated in a longitudinal sulcus ..... (7)

(6) (5) Tegmina in repose shallowly tectiform and with apical margins not apposed; abdomen not laterally compressed, sometimes moderately dorsoventrally depressed ..... (9)

(7) (8) Vertex distinctly angularly emarginate at apex ..... *Kirbyana* Dist.

(8) (7) Vertex truncate at apex, distinctly broader than long ..... *Ptoleria* Stål

(9) (10) Tegmina with the first (basal) fork of M closer to the fork of M_3 and M_4 than to the fork of M_1 and M_2 ..... *Mnemosyne* Stål

(10) (9) First fork of M in tegmina closer to forking of M_{1+2} than to forking of M_{3+4} ..... (11)

(11) (12) Mesonotum with five carinae ..... *Oliarus* Stål

(12) (11) Mesonotum with three carinae ..... (13)

(13) (14) Carina between vertex and frons obsolete, median frontal carina absent or only present on apical portion ..... (15)

(14) (13) Carina between vertex and frons and median frontal carina distinct ..... (17)

(15) (16) Tegmina with M 5-branched at apex, Cu_1 3-branched; wings with Cu_1 3-branched; frons as long as discal portion of clypeus or longer ..... *Kuvera* Dist.

(16) (15) Tegmina with M 4-branched at apex, Cu_1 2-branched; wings with Cu_1 2-branched; frons distinctly shorter than discal portion of clypeus ..... *Betacixius* Mats.

(17) (18) Pronotum laterally carinate between eyes and tegulae ..... *Macrocixius* Mats.

(18) (19) Pronotum not laterally carinate, lateral discal carinae following hind margin of eyes ..... *Cixius* Latr.

Genus **Andes** Stål

Stål, 1866:166. Logotype, *Andes undulatus* Stål, 1870:747.

Andes uncinatus Fennah, new species.
(Figure 1, A–C.)

MALE: length, 3.5 mm.; tegmen, 6.2 mm.

Ochraceous; head, except lateral frontal margins, pronotum immediately

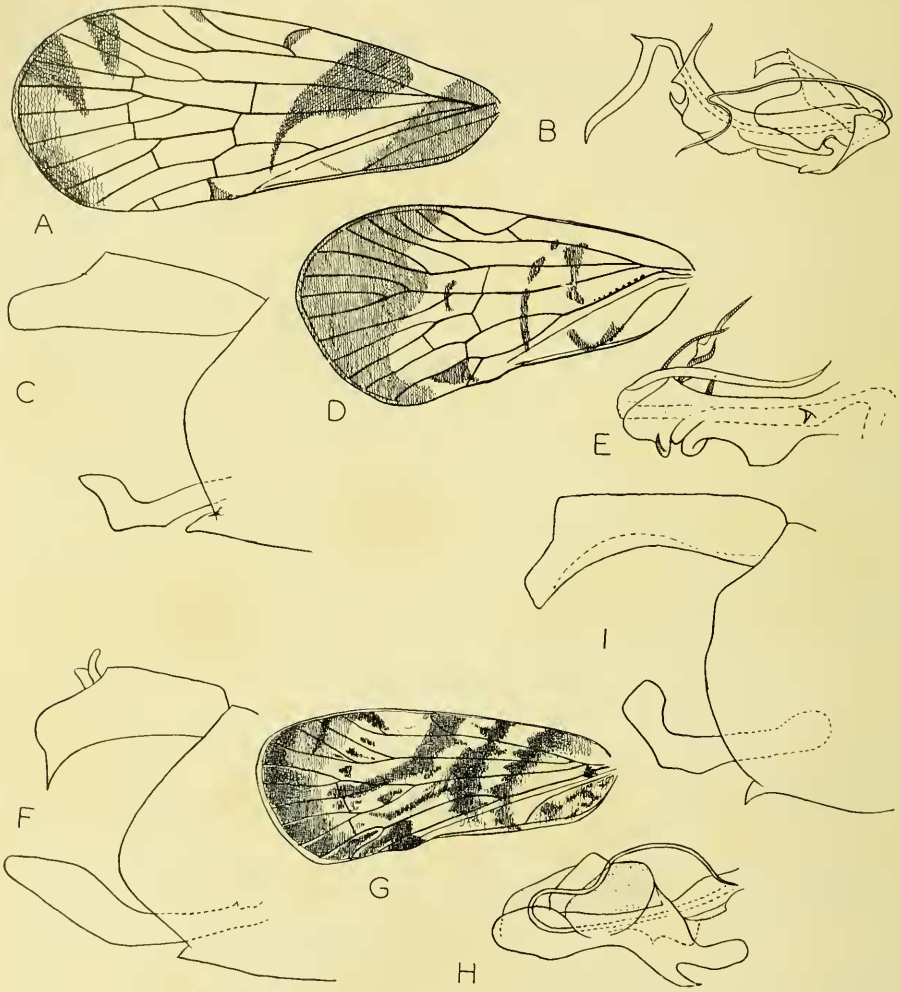


Fig 1. *Andes uncinatus*, new species: A, tegmen; B, aedeagus, left side; C, anal segment, hind margin of pygofer, and right genital style, side view. *Andes othrepte*, new species; D, tegmen; E, aedeagus, right side; F, anal segment, hind margin of pygofer, and right genital style, side view. *Andes noctua*, new species: G, tegmen; H, aedeagus, right side; I, anal segment, hind margin of pygofer, and right genital style, side view.

behind eyes, disc and disc of mesonotum, and abdominal tergites, fuscous; lateral fields of mesonotum brown. Tegmina translucent, basal area to level of union of claval veins, a narrowing curved fascia from middle of costal cell to near apex of clavus, three short stripes more or less in line from distal stigma to apex of clavus, two wedges near apical angle, and a suffusion across apical cells fuscous, a faint band from node to apex of clavus, and a suffusion across membrane yellow.

Anal segment moderately long, bilaterally symmetrical, anal foramen at distal third, apical margin rounded-truncate, latero-apical angles rounded, not produced. Pygofer with lateral margins strongly convex, medioventral process triangular, acute at apex, with a short spine on each side at base. Aedeagus tubular, an irregular denticulate ventral keel, swollen on left side near base and produced in short curved tooth at base, directed basad, distally a foliate lobe on left enwrapping distal left side and apex, flagellum comprising a long slender blade-like spine, slightly denticulate, rising at apex, curved to right then cephalad, completely looped distally, a broad and short lobe on left with a strongly sinuate upper margin, a shortly tapering membranous lobe dorsally. Genital styles of subequal width throughout, rectangulately bent at distal third, obliquely truncate at apex.

One male (the type), 700–900 m. **Kan-Lin-San, Lien-p'ing District, Kwangtung, S. China,** J. L. Gressitt, April 23, 1940. This species differs in genital structure from any of those reviewed by Muir (1925), and in tegminal markings from any known to the writer. In the latter character it perhaps most closely approaches *Andes migratorius* (Dist.). The spines laterad of the medioventral process of the pygofer are exceptional.

Andes othrepte Fennah, new species.

(Figure 1, D–F.)

Male: length, 3.6 mm.; tegmen, 5.0 mm.

Castaneous-brown, lateral carinae of frons and clypeus, an oblique stripe between eye and margin, antennae, pronotum, tegulae, rostrum, and legs testaceous to stramineous. Tegmina subhyaline with greyish powdering; a broad even band from basal cell to middle of clavus and a broad oblique band from costal cell basad of stigma to apex of clavus, dull yellow; a short stripe bounding latter band on its basal margin, and a more or less complete stripe bounding its distal margin, an obliquely L-shaped mark across middle of clavus, a spot just basad of stigma and a slightly larger spot across all Cu_{1b} and apex of clavus fuscous; stigma and membrane pale brown, veins concolorous, minutely granulate with fuscous on corium. Wings translucent, powdered sordid white, with fuscous veins.

Anal segment of male moderately long and rather broad, lateroapical angles acutely produced ventrad, anal foramen slightly distad of middle. Pygofer laterally strongly convex on hind margin, medioventral process

subequilaterally triangular. Genital styles elongate, in profile angulately bent at basal third, in posterior view distal portion wider than basal, of subequal width throughout, shallowly rounded at apex. Aedeagus tubular, a triangular flange on ventral surface near base, directed to left; on right ventrally, two-thirds from base, a stout spine directed to left below aedeagus then dorsad; slightly distad of this, ventrally on right, a short stout spine directed to right, then dorsad; at apex a long, rather slender, sinuate process directed cephalad above aedeagus then curved to left; flagellum with two slender unequal spines arising near base, the dorsal slightly curved, the ventral in form of a shallow spiral.

One male (the type), **Hong Kong Island,** Aug., 1933, W. E. Hoffman. This species recalls *A. undulatus* Stål, but differs from the female holotype in tegminal markings, and from the male, as identified by Muir, in the shape of the genitalia.

Andes noctua Fennah, new species.

(Figure 1, G–I.)

Male: length, 3.2 mm.; tegmen, 4.5 mm. Female: length, 5.1 mm.; tegmen, 6.0 mm.

Dark fuscous: a spot on sides of head above eyes piceous; a series of frequent and fairly even sublinear interruptions on lateral margins of vertex and frons, and a ring round base of antennae pallid stramineous, antennae, lateral fields of pronotum, sometimes interruptedly, rostrum, lower side of thorax and legs stramineous, more or less suffused fuscous.

Tegmina translucent, powdered ash-grey: a narrow irregular stripe from basal third of costal cell to union of claval veins, a zig-zag narrow stripe subparallel to preceding from middle of costal cell to claval suture at apical fifth, a broader oblique band from apex of costal cell to subapical transverse line at M, a band overlying transverse veinlets from M to apex of clavus, apical cells fuscous; a spot at distal edge of stigma and on marginal dilation at apex of clavus fuscous-piceous. Wings translucent, distally suffused fuscous, powdered grey, veins fuscous.

Anal segment elongate, distally shallowly deflexed, apical margin very short, slightly excavate, lateroapical angles scarcely produced, anal foramen in distal quarter. Pygofer with laterodorsal angles obtuse but well-defined, lateral margins convex, medioventral process triangular, flanked on each side at base by a distinct spine-like process. Genital styles short, in profile subrectangulately bent at middle, slightly dilated and rounded-truncate at apex. Aedeagus tubular, a small flange on right near base, directed laterad and minutely denticulate on margin; mesad of this a triangular vertical flange directed ventrad; a broad submembranous trough-like lobe, attached at apex, free at cephalad end, loosely enwrapping aedeagus for most of its length, this lobe truncate at anterior margin

on left, on right (ventrolaterally) produced in three short broad lobes, the middle lobe denticulate on margin. A long strongly sinuate spine arising at apex of aedeagus directed cephalad above aedeagus; flagellum short, unornamented.

Two males (one the type) and 8 females, 1,000 m. **Suisapa, Lichuan District,** W. Hupeh, China, July 23, 1948, Gressitt.

In gross structure this species appears to be allied to *A. marmoratus* (Uhl.). The general conformation of the aedeagus is as found in *A. marmoratus,* but the details of its outline are different, while the anal segment is relatively longer basad of the anal foramen and the genital styles differently shaped at the apex. The tegminal markings are less clearly defined than in *A. marmoratus* and in the region of the claval suture distinctly different. The apical venation of R and M described by Muir is not found in the present species.

Andes lachesis Fennah, new species.
(Figure 2, M, N.)

MALE: length, 4.0 mm.; tegmen, 5.2 mm. FEMALE: length 4.1 mm.; tegmen, 6.2 mm.

Stramineous to testaceous, disc of frons and clypeus, genae and sides of head above eyes, except for an oblique pallid stripe, vertex, median portion of pronotum and mesonotum, castaneous-fuscous. Tegmina translucent pallid; inner angle of clavus, a broad band from basal cell between Cu_1 and first claval vein to near apex, and two suffused areas on M and Cu_1 fork respectively, yellow; an L-shaped mark near union of claval veins, an arcuate broad fascia from basal third of costa, where it is once interrupted, to clavus near apex, a spot at apex of costal cell and another just distad of stigma, a short stripe across subapical cell M_{1+2} and a spot on margin distad of claval apex, dark fuscous; membrane pale fuscous with two elongate-ovate pallid areas in apical cells. Veins concolorous with fine fuscous granulation. Tegmina sometimes suffused with pale fuscous in all lighter areas. Wings sordid white, veins pale fuscous.

Anal segment of male moderately long, relatively broad, with subparallel sides, apical margin excavate, lateroapical angles asymmetrically produced, anal foramen in distal half. Pygofer with posterior lateral margins broadly convex, medioventral process triangular. Aedeagus with a large vertical triangular keel below, which is continuous above with a loose wide shagreen sleeve which surrounds the aedeagal duct. This loose sleeve bears dorsally a short slender spine directed to right, and below this, a little more cephalad, a small elongate-triangular shagreen lobe. At apex of aedeagus a long stout sinuate spinose process directed cephalad above aedeagus, distally curving abruptly to right and ventrad. Flagellum coarsely shagreen or sub-fimbriate.

Five males (one the type) and two females, **Mokansan, Che-Kiang**

Province, Sept. 19–28, 1927, Mrs. D. E. Wright. A female taken at 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, Aug. 21, 1948, Gressitt, is placed here.

In the denticulate process of the aedeagus this species can be compared with *A. pseudobrunneus* Muir and *A. brunniceps* Muir; it differs from both in the deep ventral carina below the aedeagus, and in the position and shape of the spinose processes, in the shape of the anal segment and genital styles, and in the color pattern of the tegmina.

Genus **Ptoleria** Stål

Stål, 1859a:321. Haplotype, *Ptoleria arcuigera* Stål, 1859a:321.

Ptoleria indica (Distant).

Caneirona indica Distant, 1916:39.

One female, 1,000 m. Suisapa, Lichuan District, W. Hupeh, Aug. 23, 1948, Gressitt, is generally similar to Distant's type but with greater fuscous suffusion over the hind portion of the membrane.

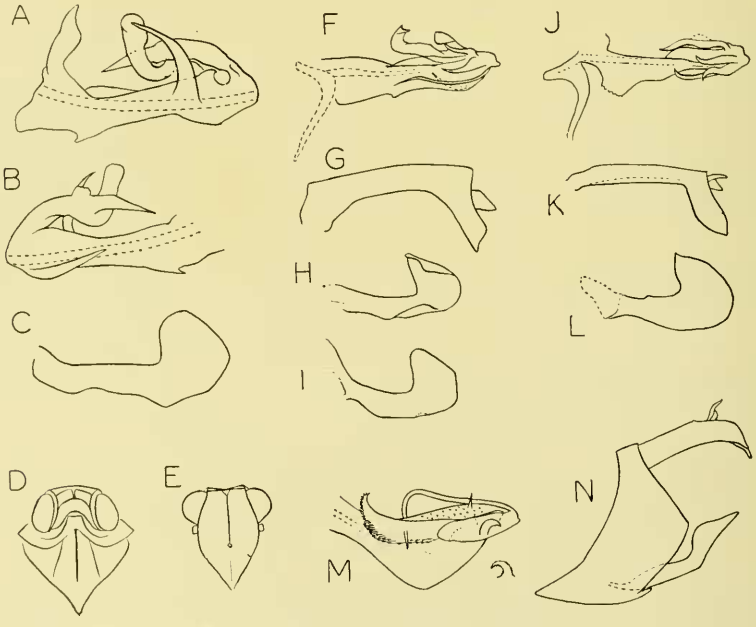


Fig. 2. *Cixius scrupeus*, new species: A, aedeagus, left side; B, aedeagus, right side; C, left genital style; D, head and thorax; E, frons and clypens. *Cixius phonascus*, new species; F, aedeagus, left side; G, anal segment of male, right side; H, right genital style, inner aspect; I, left genital style, outer aspect. *Cixius galcola*, new species: J, aedeagus, left side; K, anal segment of male, left side; L, left genital style. *Andes lachesis*, new species: M, aedeagus, left side (process of left side also shown detached); N, anal segment, pygofer and left genital style.

Genus **Cixius** Latreille

Latreille 1804:310. Logotype, *Cicada nervosa* L. 1758 Syst. Nat. 10:437.

Cixius phonascus Fennah, new species.

(Figure 2, F–I.)

Male: Length, 5.0 mm.; tegmen, 6.1 mm.

Vertex broader across base than long in middle, width of apex more than half of base, both transverse carinae convexly angulate. Dark reddish brown; carinae of pronotum and vertex and legs testaceous. Tegmina translucent, more or less brown with pale areas; basal area usually suffused brown, a diffuse fascia from union of claval veins transversely across to costa, a suffusion in membrane yellowish-brown, apical cells at base and apex fuscous, veins yellow. Wings infuscate distad of transverse veins, veins fuscous.

Tegmina with 1 or 2 Sc veins at apex distad of stigma, 3 R's and 5 M's.

Anal segment long, tubular, deflexed at anal foramen in apical quarter, apical margin deeply rounded. Pygofer short dorsally, long ventrally, with lateral margins obtusely angulately produced, medioventral process short, triangular. Genital styles short, expanding distally, curved through about 110° at middle, angle at apex of dorsal margin slightly produced, acute. Aedeagus tubular, more or less straight, a moderately long spine arising ventrally at apex, shallowly sinuate, directed cephalad below aedeagus, on left near apex a pair of short curved spines, a short upcurved spine on right distally; flagellum more or less tubular, sinuate, directed cephalad.

One male (the type), **Loh Fau Shan, Poh-lo District, Kwangtung, S. China,** April 6–8, 1934; one male and one female, Yaoshan, Lin-hsien, Kwangtung, S. China, May 6–10, 1924.

This species differs from *C. graeelyi* Muir in its larger size, paler body-color, infuscate distal area of the wings, and in the shape of the genital styles; from *C. laticeps* Metc. in almost every detail of coloration. In tegminal markings it is perhaps nearest to *C. velox* Mats., from which it is separated by the proportions of the vertex: from *C. kuyanianus* Mats. it differs in tegminal markings and darker body-color, and, apparently, in the shape of the apical portion of the genital styles.

Cixius galeola Fennah, new species.

(Figure 2, J–L.)

Male: length, 4.9 mm.; tegmen, 6.0 mm.

Vertex only slightly broader across base than long in middle line, width of apex equal to half width between basal angles.

Testaceous; mesonotum castaneous. Tegmina yellowish hyaline; a faint suffusion along costal cell, brown; a bold broad spotted fascia obliquely across membrane from apical cell Cu_1 to apex of Sc; veins yellow. Wings

hyaline, a broad suffusion along margin extending inward to cover apical cells, fuscous, veins concolorous.

Tegmina with 2 Sc veins at apex distad of stigma, 3 R's, 5 M's, Sc + R fork basad of Cu_1 fork, which is basad of union of claval veins.

Genitalia similar to preceding, distance between anal foramen and lateral margin shorter than in preceding. Aedeagus tubular, straight, a very short stout curved spine arising ventrally at apex, curved to right, on left side near apex two spines, the ventral spine about half as long as the dorsal, strongly curved anteriorly and cephalad, dorsal spine sinuate, directed anteriorly, on right side near apex a moderately long spine directed cephalad, curved dorsad at its apical third, flagellum as in preceding species. Genital styles as figured.

One male (the type), **Keung-Tin-Heung, Lin-Hsien District, Kwangtung, S. China,** July 13–14, 1934.

Cixius galeola differs from *C. pilosellus* Mats. in that the anterior transverse carinae of the vertex are not acutely angulate, and the clavus is devoid of fuscous markings: from *C. nawae* Mats., apart from differences in tegminal marking, it is separated by the shape of the medio-ventral process of the pygofer, which in *C. nawae* is narrow and oblong: from *C. nitobei* Mats., to which it is perhaps nearest, it differs in the tegminal markings.

Cixius scrupeus Fennah, new species.
(Figure 2, A–E.)

Male: length, 4.9 mm.; tegmen, 5.6 mm.

Piceous; carinae and margins of head, pronotum and tegulae, femora at apex, yellow or testaceous; post-tarsi and longitudinal stripes on post-tibiae pale fuscous. Tegmina greyish-hyaline, a suffusion at base, one or two in middle of clavus and a spot near its apex brownish fuscous; stigma, except at base, and veins of membrane, fuscous-piceous, veins otherwise stramineous with granules darker. Wings greyish hyaline, veins yellowish, distally fuscous-piceous.

Anal segment elongate-ovate, distal margin shallowly convex, latero-apical angles not produced. Pygofer short dorsally and ventrally, lateral margins broadly produced, medioventral process broadly triangular. Genital styles narrow at base, expanded and curved dorsad distally. Aedeagus tubular, slightly expanding distally, a long stout spine on left side one-third from apex, directed dorsad and curved cephalad at tip, a short spine near apex on right, slightly curved, directed laterad then obliquely dorso-cephalad; flagellum sinuate, distally with a stout spine directed cephalad, apical portion of flagellum in form of an even curved tube.

One male (the type), **Arisan to Hoshe, Tainan-Taichu District, Formosa** July 14, 1948, Gressitt.

In general coloration this species can only be compared with *C. hakonensis*

Mats. It differs in that the frons and vertex are yellowish only at the margins, not entirely, while the legs in *C. hakonensis* are yellow, not mostly piceous as above. In *C. hakonensis* three piceous spots lie close to the costal margin; the medioventral process of the pygofer is narrow and peglike, while the distal margin of the male anal segment is shallowly excavate.

Cixius spp.

One mutilated specimen, 2,300 m. Ali Shan (Arisan), Tainan District, Mar. 10, 1948, L. Gressitt. This species is near *C. kuyanianus* Mats. One female, with a relatively elongate and porrect ovipositor, taken by the above collectors in the same locality on August 20, 1947, is close to *C. arisanus* Mats.

One mutilated specimen and one female, Yaoshan, Lin-hsien District, Kwangtung, S. China, May 6–10, 1934. In this pair the vertex is broader than long and almost as wide at apex as at base.

Genus **Oliarus** Stål

Stål 1862:306. Logotype, *Oliarus walkeri* Stål 1859b:272

Oliarus kurseongensis Dist.
(Figure 4, G–H.)
Distant, 1911, Ann. Mag. Nat. Hist. (8)8:737.

One male, 1,000 m. Suisapa, Lichuan District, W. Hupeh, July 27, 1948, Gressitt.

Oliarus nigronervatus Fennah, new species.
(Figure 3, A–F.)

Male: length, 5.5 mm.; tegmen, 8.0 mm.

Vertex longer than broad (1.26:1), lateroapical acrolets separated by a rectangular median fossette, frons with disc markedly hollowed on each side of median carina, lateral margins obliquely subfoliate, median ocellus visible, though obsolescent. Rostrum slender, apical segment attaining postcoxae, slightly shorter than subapical. Post-tibiae feebly trispinose, apically with five short spines and one long spine, basal metatarsal segment with 7 teeth, second metatarsal with six. Tegmina with Sc + R fork level with Cu_1 fork.

Castaneous-piceous; carinae of head and pronotum, subapical segment of rostrum, femora, and tibiae at apex testaceous; a short bar laterally on frons at apex, extending across genae to antennae, stramineous. Tegmina milky-hyaline, suffused fuscous near apex; veins and margins, except at stigma and apex of clavus, piceous. Wings milky-hyaline, suffused fuscous near distal margin, veins piceous, margins dark fuscous but pale at node.

Anal segment elongate, asymmetrically ovate. Pygofer with laterodorsal angles asymmetrically produced, medioventral process basally parallel-sided, distally acute. Aedeagus narrowly ring-like at base, with three narrow

processes, one of them approximately T-shaped, directed caudad as figured. Genital styles long and narrow, more or less straight, slightly swollen before apex.

One male (the type), 1,000 m. **Suisapa, Lichuan District,** W. Hupeh, China, Aug. 19, 1948, Gressitt. This species is distinguished by the shape of the male genitalia. It differs from *O. walkeri* Stål in size and in the presence of a median fossette at the apex of the vertex; in the shape of the vertex from *O. caudatus* (Wlk.), *O. hodgarti* Dist., *O. simlae* Dist., *O. singularis* Muir, *O. geniculatus* Stål, *O. angusticeps* Horv., *O. trifasciatus* Mats. and Matsumura's species *O. horishanus, O. iguchii, O. quadricinctus, O. pachyceps, O. boninensis, O. tappanus, O. speciosus, O. mori, O. hopponis, O. artemisiae,* and *O. kagoshimensis;* in the shape of the male genitalia from all Oriental and Pacific species known to the writer or figured by Muir, and in coloration from *O. stigma* Motsch., *O. tabrobanensis* Mel., *O. fusconebulosus* Dist., *O. binghami* Dist., *O. indicus* Dist., *O. greeni* Dist., *O. annandalei* Dist., *O. prolongulus* Muir, *O. harimaensis* Mats., *O. hachijonis* Mats., *O.*

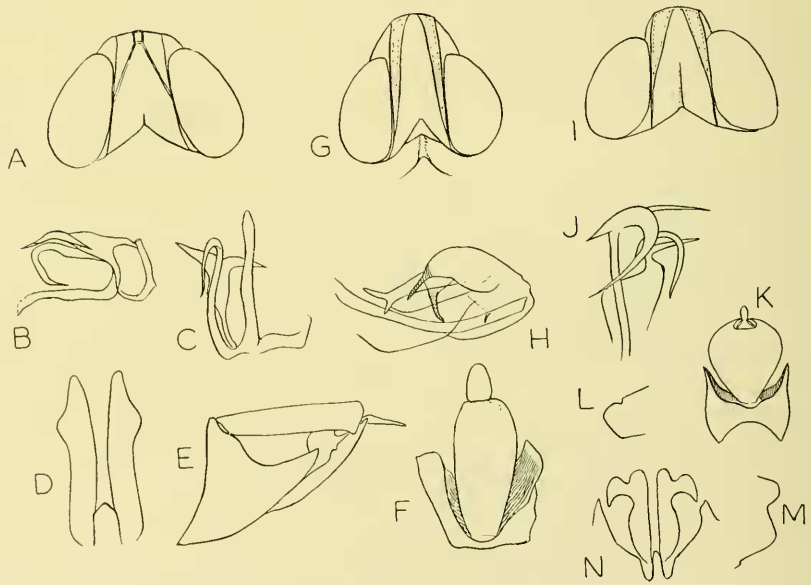


Fig. 3. *Oliarus nigronervatus*, new species: A, vertex; B, aedeagus, right side; C, aedeagus, ventral view; D, medioventral process of pygofer, and genital styles, ventral view; E, male genitalia, left side; F, anal segment and pygofer, dorsal view. *Oliarus cucullatus* Noualh.: G, vertex; H, aedeagus, left side, small ventral spine viewed by transparency. *Oliarus insetosus* Jac.: I, vertex; J, aedeagus, dorsal view; K, anal segment of male; L, sketch of margin of pygofer, right side; M, sketch of margin of pygofer, left side; N, genital styles and medioventral process of pygofer.

ogasawarensis Mats., and *O. apicalis* Uhl. In the shape of the male genital styles it differs from *O. formosanus* Mats., *O. velox* Mats., and *O. oryzae* Mats.

Oliarus cucullatus Noualh.
(Figure 3, G, H.)
Noualhier, 1896:255.

Male: length, 4.0 mm.; tegmen, 4.8 mm. Female: length 4.5 mm.; tegmen, 5.5 mm.

Vertex narrow, 1.6 times as long in middle line as broad across base, lateroapical areolets long, narrow, extending caudad to one-fifth from base, lateral margins foliate, disc deeply hollowed out, frons and clypeus narrowly lozenge-shaped, disc of frons only shallowly hollowed out on each side of middle, median ocellus not visible, rostrum attaining post-trochanters, with apical segment as long as subapical. Post-tibiae laterally bispinose, apically six-spined. Basal metatarsal segment seven-toothed, second segment five-toothed. Tegmina with Sc + R fork level with Cu_1 fork.

Castaneous-fuscous; carinae broadly, tegulae, femora and tibiae at apex, post-tarsi, and hind margins of abdominal ventrites stramineous; two spots on side of head above eyes greyish-white. Tegmina of male translucent, subopaque, powdered sordid white, veins yellow except at apex, obscurely granulate, cross-veins and apical veins fuscous; tegmina of female either as in male or yellowish-hyaline at base of clavus, otherwise fuscous-castaneous, except for yellow proximal and ventral margins of stigma, veins concolorous or fuscous. Wings wholly greyish-white with brown veins (male) or distally infuscate with fuscous veins (female).

Anal segment of male asymmetrical, right margin excavate. Pygofer with lateral margins asymmetrically produced into a broadly rounded lobe on left side, and a turbinate subacute lobe on right, medioventral process short, acute. Aedeagus tubular, a broad triangular lobe, terminating in a spine on right near apex directed ventrad, flagellum terminating in a pair of short spines directed slightly to right, on left two spines. Genital styles in ventral view parallel-sided, at apex narrowly and acutely produced laterad, and feebly roundly produced mesad.

Anal segment of female moderately short, lateral margins shallowly rounded, apical margin truncate. Posterior margin of seventh sternite very shallowly excavate in middle. Ovipositor with first valvulae much reduced, shortly triangular, third valvulae about as long as anal segment, elongate-triangular, flattened and blade-like.

One male, Hangchow, China (May 22, 1923) E. C. Van Dyke, 1 female, Sui-Kwan San, Tin-tong, Loh-chan District, Kwangtung, S. China, Aug. 1947; 13 males, 14 "pale" females and 15 "dark" females, 1,000 m. Suisapa, Lichuan District, W. Hupeh, China, July 19–25, 1948. One mutilated male,

Pan-yu District, Honam Island, Canton, S. China, May 1–15, 1934, W. E. Hoffman, and a mutilated specimen from Honam Island, May 16, 1933, W. E. Hoffman, are assigned to this species. This species recalls *O. simlae* Dist. but differs from the type in the shape of the vertex: it is highly probable that *Mnemosyne* (?) *sinica* Jac. is conspecific, but the evidence is too weak to justify the suppression of Jacobi's trivial name.

Oliarus insetosus Jac.

(Figure 3, I–N.)

Jacobi, 1944:13.

Male: length, 3.6 mm.; tegmen, 4.0 mm. Female: length, 3.2 mm.; tegmen, 4.3 mm.

Vertex longer in middle line than broad (1.5:1), lateroapical areolets extending backward to one-third from base, contiguous at apex. Frons with disc very shallowly tectiform, scarcely concave between carinae; median carina forked at base, rostrum with apical segment slightly shorter than subapical, attaining posteoxae. Tegmina with Sc + R fork much distad of Cu_1 fork. Post-tibiae feebly trispinose laterally, with six spines at apex, basal metatarsal segment with 7 teeth at apex, second metatarsal segment with five teeth.

Piceous, carinae and margins of head and pronotum, femora at apex, post-tibiae and all tarsi, margins of abdominal ventrites testaceous or ochraceous. Tegmina subhyaline, powdered greyish-white, stigma, distal transverse veins, and apical veinlets piceous, veins otherwise stramineous. Wings greyish white, distal margin and apical veins narrowly fuscous, veins otherwise pale yellowish-brown.

Anal segment of male obcordate-ovate, apical margin deflexed and shallowly excavate. Pygofer with lateral margins slightly asymmetrical, that on left in profile with laterodorsal angle roundly produced, margin subrectangulate below this: margin of right side very slightly notched near lateroapical angle, apical margin oblique, medioventral process moderately long, narrow, acute, in side view shortly bladelike, striate. Aedeagus dorsoventrally compressed, a short spine below, near middle directed to right, two longer curved spines on left near apex directed to left, at apex a slightly shorter curved spine directed to left, subparallel to preceding, a broad falcate lobe arising on left at apex, directed dorsad and cephalad, opposite this on right a membranous flagellum, slightly shorter. Genital styles as figured.

Pregenital sternite of female with hind margin only very slightly produced, and very shallowly excavate medially.

One male, P'an Yu District, Honam Island, Canton, S. China, April 20, 1934, W. E. Hoffman; one female, Un-long, New Territories, Hong-Kong, Sept. 19, 1940, J. L. Gressitt; four males and one female, 800–1,000 ft. trail

between Lau-Tau-Di and Chang-Tau-Ching, Szechwan, China; one male, Sang-Hou-Ken, Hupeh-Sze Border, China, July 19, 1948, Gressitt. This species differs from *O. walkeri* Stål, which it closely resembles, in size, in the distinctly longer lateroapical facets of the vertex, and in the shape of the male genitalia.

Oliarus petasatus Noualh.
Noualhier, 1896:255.

Length about 4.5 mm.; tegmen, 6.0 mm.

Median ocellus present. Rostrum with apical segment slightly exceeding sub-apical, attaining post-coxae. Post-tibiae 3–5 spined (base and supernumerary feeble), apically 6-toothed, basal metatarsal segment 7-toothed, second metatarsal 5-toothed.

Venation as in *O. cucullatus;* Sc + R forked slightly distad of Cu_1, one apical Sc vein beyond stigma, 3 Rs, 5 Ms. Castaneous-piceous; carinae and margins of head, and tegulae, brownish-yellow, tibiae and tarsi paler. Tegmina hyaline, stigma yellowish-brown, veins stramineous; cross-veins and forks of clavus, Cu_1, and a minute spot in middle of vein M on corium infuscate.

One mutilated specimen, 1,900 m. Kunming, Yunnan-fu, Yunnan, S. W. China (July 4, 1940), Gressitt.

This species superficially appears to be closely related to *O. cucullatus,* but it stands apart in the shape of the vertex and the presence of a functional median frontal ocellus.

Genus **Nesopompe** Kirkaldy

Kirkaldy, 1907:107. Orthotype, *Oliarus felis* Kirkaldy, 1906:399

Nesopompe tsoui Muir.
Figure 4, A–F.)
Oliarus tsoui Muir, 1925:365.

Two males, 1,000 m. Suisapa, Lichuan District, W. Hupeh, China, June 23, 1948, (Gressitt); 1 male, Mimasaka, Japan, July, 1912, (J. C. Thompson).

Genus **Betacixius** Matsumura

Matsumura, 1914:412. Orthotype, *Betacixius ocellatus* Mats. 1914:412

KEY TO SPECIES OF BETACIXIUS

(1) (2) Tegmina with a large, ocellate black spot apically.....(3)

(2) (1) Tegmina without such a spot distally.....(5)

(3) (4) An oblique brown band extending from clavus part way across middle of corium.....*B. tonkinensis* Mats.

(4) (3) Corium of tegmina without such a band.....*B. ocellatus* Mats.

(5) (6) Tegmina with a tapering oblique dark band extending from stigma along nodal line of cross veins to Cu.....(7)

(6) (5) Tegmina without such a band ..... (15)

(7) (8) Tegmina with apical cells of M and Cu strongly infuscate ..... *B. transversus* Jac.

(8) (7) Tegmina with apical cells not infuscate ..... (9)

(9) (10) Tegmina with apical margin black or obviously very dark ..... (11)

(10) (9) Tegmina with apical margin fuscous or not especially darkened ..... (13)

(11) (12) Frons with a pallid spot at middle of lateral margins, clypeus dark, mesonotum testaceous ..... *B. kumejimae* Mats.

(12) (11) Frons without such spots; mesonotum, except scutellum, castaneous-piceous ..... *B. euterpe*, new species

(13) (14) Tegmina with an oblique dark band extending from clavus into middle of corium, little distad of level of union of claval veins ..... *B. pallidior* Jac.

(14) (13) Tegmina with a spot near sutural margin of clavus near union of claval veins, no oblique dark band at this level extending into corium ..... *B. obliquus* Mats.

(15) (16) Tegmina greyish hyaline, only infuscate at stigma ..... male *B. nigromarginalis*, new species

(16) (15) Tegmina with a dark spot or line in clavus ..... (17)

(17) (18) Tegmina with apical margin black or very dark ..... (19)

(18) (17) Tegmina with apical margin not especially dark ..... (25)

(19) (20) A V-shaped dark mark in stigma, an oblique band from middle of clavus extending into corium ..... *B. nigromarginalis*, new species

(20) (19) No such oblique fascia from clavus into disc of corium ..... (21)

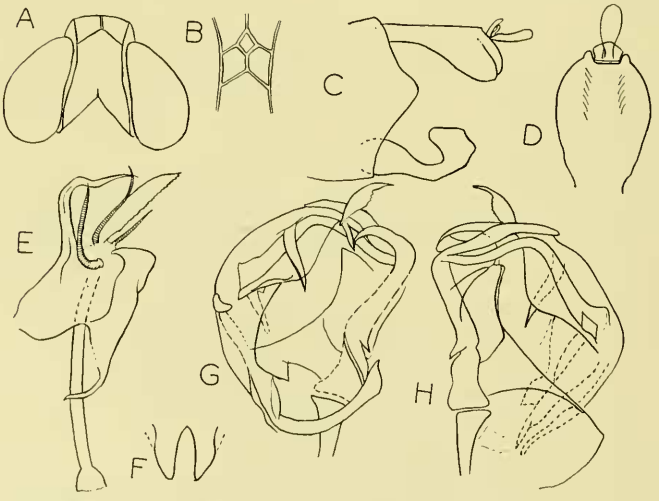


Fig. 4. *Nesopompe tsoui Muir*: A, vertex; B, fossette of vertex; C, anal segment, hand margin of pygofer, and genital style, side view; D, anal segment of male, dorsal view; E, aedeagus; F, medioventral process of pygofer. *Oliarus kurseongensis* Dist.: G, aedeagus, left side; H, aedeagus, right side.

(21)(22) Costa black, a curved black line in stigma, a spot in clavus ..... *B. rinkihoni* Mats.

(22)(21) Costa not especially dark, posterior margin of clavus dark ..... (23)

(23)(24) Clypeus distally black, pronotum laterally pallid, tegulae sordid yellow, their posterior edge dark ..... *B. clypealis* Mats.

(24)(23) Clypeus distally brown, pronotum laterally brown, pallid only at margin, tegulae light brown ..... *B. brunneus* Mats.

(25)(26) Stigma and first apical cell of tegmen piceous ..... *B. robustus* Jac.

(26)(25) Stigma dark, a dark suffusion over all apical cells and across base of tegmina ..... *B. nelides*, new species

Betacixius nigromarginalis Fennah, new species.

Male: length, 3.2 mm.; tegmen, 4.2 mm. Female: length, 3.4 mm.; tegmen, 5.0 mm.

Reddish-brown; frons lateroapically, lateral margins of pronotum (occasionally whole pronotum) and trochanters, stramineous-yellow; pronotal disc, mesonotum and abdominal tergites castaneous to piceous. Tegmina of female hyaline with greyish bloom, stigma with narrowly V-shaped mark fuliginous, Sc in stigma and vein round apical margin black; a narrow transverse fascia across clavus at apical third, extending into corium to cell M, a tinge at base of clavus reddish-brown; basal margin of clavus yellowish. Tegmina of male usually dark only at stigma, otherwise hyaline with stramineous veins. Wings hyaline with stramineous veins.

Anal segment of male moderately long, telson slightly basad of middle, apical margin transverse-concave, apical angles acuminately produced. Pygofer with lateral margins strongly convex, medioventral process subtriangular, rounded at apex. Genital styles S-shaped, apposed ventral margins enclosing a broadly ovate space, distal portion of each style falcate. Aedeagus with a circularly curved spine on left near apex and a short ledge in a similar position on right; flagellum lying above left margin, sides parallel for most of length, distally a short curved spine directed cephalad, and below this a subquadrate plate with a stout spine directed ventrad.

Described from 8 males (one the type) and 20 females, **Suisapa, Lichuan District, W. Hupeh, China,** on ridge about 1,200 to 1,500 m. (Gressitt, July 19–25, 1948). This species is distinguished by the shape of the male genitalia and by coloration.

Betacixius nelides nelides Fennah, new species and new subspecies.

Male: length, 3.5 mm.; tegmen, 4.2 mm. Female: length, 3.5 mm.; tegmen, 4.8 mm.

Fuscous; carinae and median area of frontal disc reddish-brown, hind margin of pronotum, hind tibiae, and tarsi stramineous; lateral fields of pronotum, fore and middle legs, and post-femora yellow with pale fuscous suffusion; clypeus, mesonotum, pro- and mesocoxae and mesopleura, and

abdomen castaneous-piceous. Tegmina hyaline with greyish bloom, a faint suffusion at base, stigma, a small spot overlying union of claval veins, and sometimes a faint suffusion over membrane, fuscous, veins testaceous. Wings hyaline, with greyish bloom, veins fuscous.

Anal segment moderately short, asymmetrical, subovate, acutely rounded at apex, right margin produced and lateroapically deflexed in profile, anal style situated at middle; pygofer with lateral margins symmetrically convex, medioventral process broader across base than long, distally rounded. Genital styles narrow and curved basally, apically subreniform in outline, axis of apical area at right angle to basal stalk. Aedeagus with a large curved spine ventrally near apex, arising on left, curved below aedeagus and directed to right, a stout spine near apex, closely adpressed to left side and directed cephalad, flagellum with a long curved spine at base directed cephalad but decurved at abruptly-tapering apex, and a more slender curved spine directed cephalad.

Three males (one the type) and 4 females, **Tung-lu, Che-Kiang Province, China,** (Mrs. D. E. Wright, May 22, 1926). Two females from Mokansan in the same province (Mrs. D. E. Wright, Aug. 24, 1927) are doubtfully placed here.

This species is distinguished by the combination of characters given in the synopsis and by the form of the male genitalia.

Betacixius nelides atrior Fennah, new subspecies.

Male: length, 4.2 mm.; tegmen, 5.0 mm. Female: length, 3.7 mm.; tegmen, 5.0 mm.

Fuscous-piceous; basal half of frons reddish brown; rostrum, except at apex, pro- and mesochanters, post-tibiae, and tarsi stramineous.

One male and 1 female, **Hangchow, China,** (E. C. Van Dyke, May 19, 1923). This geographical subspecies is distinguished by its darker coloration.

Betacixius euterpe Fennah, new species.

Male: length, 3.6 mm.; tegmen, 4.8 mm.

Testaceous; pronotal disc pale yellow; mesonotum, except scutellum and middle portion of abdominal tergites, castaneous-piceous. Tegmina hyaline with greyish bloom, a faint suffusion at base, a fascia from sutural margin at middle of clavus across Sc + R, another from stigma along nodal line to Cu, a suffusion just distad of apex of clavus, and apical margin, fuscous-piceous.

Anal segment of male bilaterally symmetrical, apical margin transverse, lateroapical angles acuminate. Pygofer with lateral margins convex, medioventral process triangular, acute at apex. Genital styles S-shaped, width of distal portion of stalk equal to that of vertical apical portion. Aedeagus with a stout spine arising laterally on left near apex, directed cephalad,

slightly decurved at tip, a curved spine directed to right lying below flagellum in its basal half, a more slender curved spine, directed ventrally, arising on right side of flagellum near apex.

One male (the type), **Hau-leng, Tin-tong, Loh-chan District, Kwangtung Province, S. China,** (Aug. 1, 1947).

This species is distinguished by the combination of characters given in the synopsis and by the form of the male genitalia.

A female from Yaoshan, Liu-hsien District, Kwangtung (May 10, 1934), (length 3.1 mm.; tegmen 4.3 mm.), provisionally placed here, but probably representing another species, differs from the male of *B. euterpe* in having the lower part of the genae and lateroapical areas of the frons pale yellow, apical part of clypeus, procoxae, and mesopleura and basal part of mesocoxae castaneous-piceous, and legs fuscous; tegmina with a spot in clavus slightly distad of union of veins, a fascia from stigma along nodal line to Cu, all apical cells in M and Cu fuscous, margin between stigma and suffused apical area, testaceous-brown.

Genus **Macrocixius** Matsumura

Matsumura, 1914:393. Orthotype, *Macrocixius giganteus* Mats.

Macrocixius giganteus Mats.

Matsumura, 1914:394.

One female, 1,000 m., Musha (Wuse) to Bandai, Taichung District, Formosa, Aug. 24, 1947, Gressitt.

Genus **Borysthenes** Stål

Stål, 1866:165. Logotype, *Cixius finitus* Stål, 1866:392.

Borysthenes maculatus (Mats.).

Barma maculata Matsumura 1914:430.

One male, Chizuka, Okinawa, July–Sept., 1945, Bohart and Harnage.

Borysthenes acuminatus Fennah, new species.

(Figure 5, A–E.)

Male: length, 4.1 mm.; tegmen, 6.0 mm.

Testaceous; middle portion of frons and clypeus except at apex, all coxae and hind femora and tibiae faintly suffused fuscous; mesonotum and posttarsi castaneous; clypeus at apex, apical segment of rostrum, fore and middle legs distad of trochanters and abdominal ventrites dark fuscous to fuscous-piceous.

Tegmina subtranslucent, ivory white on most of corium, greyish white in costal cell and membrane, three broad fasciae, one at base, another arcuately across middle, and the third over most of membrane as figured, chocolate brown. Wings pallid with cross veins and a broad submarginal fascia, sepia brown.

Anal segment of male moderately short and broad, lateroapical angles not symmetrical. Pygofer with lateral margins slightly asymmetrical, medioventral process distally semicircularly rounded. Genital styles with inner and outer margins (in posterior view) subparallel, apical margin straight and strongly oblique, occasionally slightly reflected.

Described from 4 males (one the type), **1,000 m. Lichuan District, W. Hupeh, China,** July 23–25, 1948, Gressitt.

This species is distinguished by tegminal pattern and by the shape of the male genitalia.

Borysthenes deflexus Fennah, new species.
(Figure 5, I, J.)

MALE: length, 4.1 mm.; tegmen, 6.0 mm. FEMALE: length, 5.0 mm.; tegmen, 7.0 mm.

Ochraceous-testaceous; mesonotal disc and abdomen slightly infuscate. Tegmina translucent, powdered greyish, an arcuate irregular band from middle of clavus to basal third of costal cell, a more deeply convex band

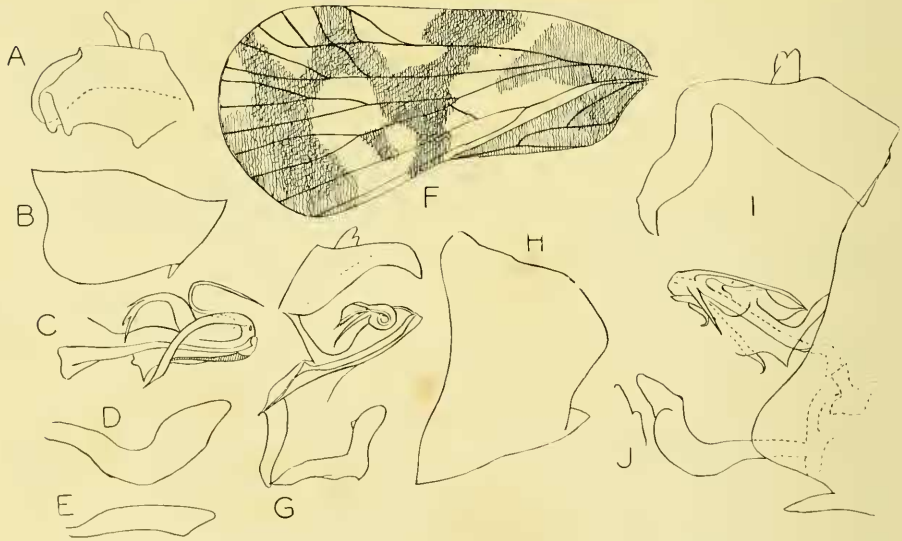


Fig. 5. *Borysthenes acuminatus*, new species: A, anal segment of male, right side; B, pygofer, right side (basal margin uppermost); C, aedeagus, left side; D, genital style, left side; E, ditto, ventral view. *Borysthenes emarginatus*, new species: F, tegmen; G, anal segment, aedeagus, and left genital style; H, pygofer, left side. *Borysthenes deflexus*, new species: I, anal segment, hind margin of pygofer, aedeagus, and right genital style, side view; J, distal outer margin of genital style, posterior view.

from middle of costal cell to distad of apex of clavus, an interrupted band from node to sutural angle, an ovate spot in apical cells near apical angle, fuscous. Wings translucent with a suffusion on costa near base and two transverse bands distally.

Anal segment of male symmetrical, acuminate at apex, in profile deflexed through 90° distad of anal foramen. Pygofer with lateral margins subrectangulately convex, medioventral process elongate-triangular. Aedeagus tubular, a short straight spine on right near apex directed ventro-cephalad, on left side near apex a short spine curved ventrad and a long porrect spine directed ventro-cephalad, and decurved at tip, a long slender spine arising dorsally at apex directed cephalad, flagellum membranous, apex subspinose and curved dorsad.

Genital styles in profile curved dorsad distally, upper and lower margins subparallel, a rounded ledge on outer face one-fifth from apex, apex acutely rounded, upper distal margin truncate.

One male (the type), **Tso-kok-wan, Lungtau Shan,** altitude 250–350 m., **Kwangtung,** June 5, 1947, Gressitt; 1 female, Keung Tin Heung, Linhsien, Kwangtung, S. China, July 16–17, 1934.

This species is distinguished by the tegminal pattern and by the shape of the male genitalia.

Borysthenes emarginatus Fennah, new species.
(Figure 5, F–H.)

MALE: length, 4.1 mm.; tegmen, 5.6 mm.

Testaceous; middle portion of frons, clypeus, all coxae, postfemora, and tibiae very slightly darker; pronotum around disc, and mesonotum, infuscate, rostrum at tip piceous.

Tegmina subtranslucent, sordid pallid yellow, a >-shaped cloud near base reddish-brown; a broad fascia from costal cell near apex to sutural margin distad of apex of clavus, a broader transverse band across middle of membrane, apical cells of R and M_1 fuscous, veins concolorous. Wings translucent powdered sordid white, veins fuscous.

Anal segment of male in profile slightly deflexed distad of middle, apical margin deeply excavate to level of anal foramen. Pygofer with lateral margins subangulately convex. Aedeagus tubular, a long slightly curved spine on right at apex, directed cephalad, flagellum twisted through 360°, minutely denticulate on margin distally. Genital styles in profile strongly angulately bent just distad of middle, an eminence distally on inner margin.

One male, **White Cloud Mountain, P'an Yu District, Canton, S. China,** May 5, 1934. This species is distinguished by coloration and by the shape of the male genitalia.

Family **DELPHACIDAE** Leach

KEY TO GENERA OF CHINESE DELPHACIDAE

(1) (2) Post-tibial spur awl-shaped, circular in cross section; mesonotum with five carinae ..... *Ugyops* Guer.

(2) (1) Spur not as above; mesonotum tricarinate ..... (3)

(3) (4) Spur thick, flattened or concave on inner face, margin without teeth ..... (5)

(4) (3) Spur thin, usually deeply concave on inner face, margin with or without teeth ..... (15)

(5) (6) Lateral carinae of frons and vertex only moderately developed ..... (7)

(6) (5) Lateral carinae of frons and vertex deeply foliate ..... *Purohita* Dist.

(7) (8) Vertex subtriangular with sides slightly convex, sometimes elongate ..... *Tropidocephala* Stål

(8) (9) Vertex quadrate ..... (9)

(9) (10) First segment of antennae not more than half as long as second ..... (11)

(10) (9) First segment of antennae at least two-thirds length of second ..... (13)

(11) (12) Mesonotum shorter than head (in dorsal view) and pronotum together ..... *Eurysa* Fieb.

(12) (11) Mesonotum longer than vertex and pronotum together ..... *Pundaluoya* Kirk.

(13) (14) Frons at least twice as long as broad, clypeus medially carinate ..... *Arcofacies* Muir

(14) (13) Frons not nearly twice as long as broad, clypeus devoid of median carina ..... *Arcofaciella*, new genus

(15) (16) Basal segment of antennae subtriangular or sagittate, widening distad ..... (17)

(16) (15) Antennae with basal segment not as above, cylindrical or slightly compressed ..... (21)

(17) (18) Antennae with basal segment sagittate; clypeus in profile subrectangulate at middle; median carina of frons forked at extreme base ..... *Belocera* Muir

(18) (17) Antennae with basal segment triangular but not sagittate; clypeus in profile not angulate at middle ..... (19)

(19) (20) Frons with paired submedian carinae ..... *Pseudaraeopus* Kirk.

(20) (19) Median carina of frons forked near level of lower margin of eyes ..... *Perkinsiella* Kirk.

(21) (22) Basal segment of post-tarsus with one or more spines on side ..... *Nilaparvata* Dist.

(22) (21) Basal segment of post-tarsus devoid of spines on side ..... (23)

(23) (24) Basal segment of antennae short, as long as broad or a little longer ..... (25)

(24) (23) Basal segment of antennae not very short, longer than broad ..... (35)

(25) (26) Vertex distinctly longer than broad ..... (27)

(26) (25) Vertex at most only slightly longer than broad, often equal to width or even shorter ..... (31)

(27) (28) Oblique carinae of vertex meeting at apex, or only slightly before it ..... (29)

(28) (27) Oblique carinae of vertex meeting much before apex and continued distad as a single median carina ..... *Saccharosydne* Kirk.

(29) (30) Second antennal segment not more than twice length of basal segment, median fossette on vertex subtriangulately elongate..... *Sardia* Mel.

(30) (29) Second antennal segment three times length of basal segment, medio-apical fossette about as long as broad, polygonal-rounded..... *Stenocranus* Fieb.

(31) (32) Median carina of frons forked at about one-third from base, or distad ..... *Dicranotropis* Fieb.

(32) (31) Median carina of frons simple or forked only at extreme base..... (33)

(33) (34) Vertex at base more than twice as broad as an eye in the same line..... *Eoeurysa* Muir

(34) (35) Vertex not twice as broad as an eye..... *Delphacodes* Fieb.

(35) (36) Clypeus fully three-quarters as long as frons; frons three times as long as broad..... *Sogata* Dist.

(36) (35) Clypeus scarcely two-thirds as long as frons; frons two and a half times as long as broad..... (37)

(37) (38) Median carina of frons forked at extreme base of frons; basal segment of antennae more than twice as long as broad at apex..... *Ukanodes*, new genus

(38) (37) Median carina of frons forked near level of middle of eyes; basal segment of antennae relatively shorter..... *Chloriona* Fieb. subg. *Sogatella*, new subgenus

Subfamily **ASIRACINAE** Fieber

Genus **Ugyops** Guérin-Méneville

Guérin-Méneville, 1834:477.

Haplotype, *Ugyops percheronii* Guérin-Méneville, 1834:477.

Ugyops vittatus (Mats.).
(Figure 6, A, C, F, G, J.)
Bidis vittata Matsumura, 1906:31, pl. 1, fig. 5.

Frons longer than broad (3:1); basal segment of antennae slightly less than two-thirds of length of second; genae not inflated below level of antennae. Aedeagus, viewed from left, with basal third of flagellum sinuate, the upper and lower margins subparallel.

One male, Chizuka, Okinawa, July–Sept., 1945, Bohart and Harnage. This species differs from *U. kinbergi* Stål from Ponape in the relatively shorter frons and smaller size.

Ugyops zoe Fennah, new species.
(Figure 6, B, D, E, H, I.)

MALE: length, 6.3 mm.; tegmen, 8.5 mm.

Frons longer than broad (3.3: 1), submedian carinae uniting one-third from apex, genae distinctly inflated below level of antennae; basal segment

of antennae two-thirds length of apical segment; vertex with posterior margin almost level with middle of eyes. Pronotal disc relatively broad, its lateral carinae distinctly convex.

Testaceous; common carinal eminence at base of frons and apex of vertex, interearinal areas of anterior half of vertex, a weak interearinal stripe on each side of frons at base, a small suffusion on sides of head above eye, carinae of vertex finely, median carina of pronotum, posterior margin and a faint cloud behind eyes, and mesonotal carinae, castaneous; second segment of antennae, protibiae, and tarsi fuscous. Tegmina sordid hyaline, lightly waxed grey, veins castaneous interrupted testaceous, apical portion of cells at distal margin infuscate; a broad infuscate Y-shaped band extending from apical margin between R and M_2 to cell M_3, where one limb passes to the margin at Cu_{1b} and the other to the nodal line between Cu and M.

Anal segment of male moderately short, bilaterally symmetrical. Pygofer with lateral margins convex caudad, rather angulately excavate below. Aedeagus, viewed from left, with basal third of flagellum markedly dilated, with ventral margin more convex than dorsal.

Holotype male, **Tai-pin-t'suen, Lam-ka-heung, Lai-mo-ling, Kiung Shan District, Hainan Island,** July 20–21, 1935; one male, Tsai-Chau (Tinhosa) Island, June 2, 1932, Hoffman; and one mutilated specimen, Tung-Chung, Lan-Tau Island (near Hong-Kong), Aug. 16–19, 1934.

Ugyops zoe broadly resembles *U. vittatus* (Mats.). The genae are inflated below the eyes (not in *U. vittatus*), the lateral carinae of the pronotal disc

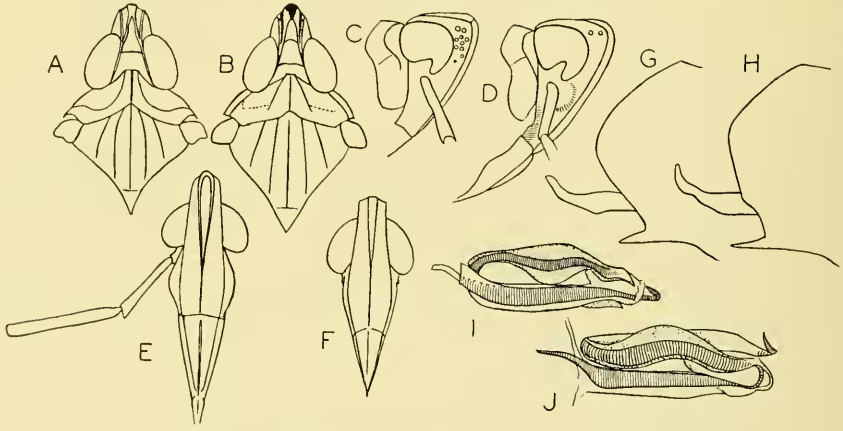


Fig. 6. *Ugyops vittatus* Mats.: A, head and thorax, dorsal view; C, head in profile; F, frons and clypeus; G, pygofer and right genital style, side view; J, aedeagus, left side. *Ugyops zoe*, new species: B, head and thorax; D, head in profile; E, frons and clypeus; H, pygofer and right genital style; I, aedeagus, left side.

are convex (concave in *U. vittatus*), and the tegmina are longer and differently marked. This species has a much shorter frons than *U. kinbergi* Stål, from which, as from *U. vittatus,* it differs in the shape of the male genitalia and in size. It differs from *U. pictifrons* Stål, *U. impictus* Stål, and *U. percheronii* Guér. in coloration and marking (the genitalia of the last three were not available for comparison).

Subfamily **DELPHACINAE** Jensen-Haarup

Tribe **Tropidocephalini** Muir

Genus **Arcofacies** Muir

Muir, 1915:319. Orthotype, *Arcofacies fullawayi* Muir

Arcofacies fullawayi Muir.
Muir, 1915:320.

One female, 300 m. Pe-poi, N. of Chung-King, Sze-chuan, W. China, July 27, 1940, J. L. Gressitt; two females, Hong-Kong, China, Oct., 1895, Koebele.

Genus **Eoeurysa** Muir

Muir, 1913:249. Orthotype, *Eoeurysa flavocapitata* Muir

Eoeurysa flavocapitata Muir.
Muir, 1913:249.

Four males and two females on sugar cane, Pan-yu District, Honam Island, Canton, S. China, May 23, July 26–31, 1935; Jan. 10, 1937, W. E. Hoffman.

Genus **Tropidocephala** Stål

Stål, 1853:266. Haplotype, *Tropidocephala flariceps* Stål, 1855:93

Tropidocephala brunnipennis Sign.
Signoret, 1860:185.

One male, Sam-ah-Kong, Yai-hsien District, Hainan Island, S. China, Feb. 1, 1935; one female, Honam Island, Canton, China, April 7, 1933; one female, Loh Fau Shan, Poh Lo District, Kwangtung, S. China, April 6–8, 1934.

Tropidocephala festiva (Distant).
Smara festiva Distant, 1906:478.

One female, Cheung-nga-San, Tin-tong, Loh-Chang District, Kwangtung, Aug. 16, 1947, Tsang, one female, Yen-ping, Nan-ping District, Fukien, June and July, 1933; one female, Yaoshan, Lin-hsien District, Kwangtung, April 27–28, 1934; one female, Hau-leng, Tin-tong, Loh-chang District, Aug. 1, 1947.

Tropidocephala speciosa Bierm.
Orchesma speciosa Bierman, 1908:29.

One female, Yaoshan, Lin Hsien District, Kwangtung, S. China, April 24–26, 1934.

Tropidocephala breviceps Mats.
Matsumura, 1907:58.

One female, Hoi-How, Kiung-Shan District, Hainan, S. China, 1932, W. E. Hoffman.

Tropidocephala signata Dist.
Distant, 1912:192.

One female, Rivière de Hue, Anam, March 16, 1927, Mrs. D. E. Wright.

Genus **Pundaluoya** Kirkaldy

Kirkaldy, 1902:52. Orthotype, *Delphax ernesti* Kirby, 1891:140

Pundaluoya sp.

One female, testaceous, with yellowish-hyaline tegmina, slightly infumed on membrane, 1,000 m. Suisapa, Lichuan District, W. Hupeh, China, July 24, 1948, Gressitt.

Arcofaciella Fennah, new genus

Head with eyes as wide as pronotum.

Vertex more than three times as broad as long in middle, anterior and posterior margins transverse, lateral margins slightly convex, strongly converging anteriorly, median carina simple, straight, frons inclined anteriorly in profile, slightly longer than broad, broadest at level of lower margin of eyes, lateral margins convex, median carina simple, shortly forked at base, area within fork apparently depressed; clypeus in profile more or less at right angle to base of frons, lateral carinae straight, median carina obsolete. Rostrum with subapical segment exceeding apical, apex reaching mesotrochanters. Antennae short, stout, second segment markedly longer than first, but both together not exceeding length of eye. Pronotum more than twice as long as vertex, anteriorly shallowly convex, posteriorly shallowly excavate, median carina distinct, lateral carinae developed only in anterior portion in line with lateral margins of vertex; mesonotum strongly convex, almost gibbous, tricarinate, mesoscutellum horizontal. Legs relatively short and stout, profemora not longer than procoxae, post-tibiae with a small spine laterally at base, another about a third from apex, five teeth at apex, spur short, convex, devoid of teeth except for a minute tooth at apex, basal metatarsal segment with about 8 small even teeth. Tegmina long, corium enfolding abdomen at region of node, costal margin sinuate, concave distad of node, apical margin shallowly undulate, forks of Sc–R and Cu_1 distad of union of claval veins, eight cells at apex, excluding stigmal cell.

Arcofaciella verrucosa Fennah, new species.
(Figure 7, A–F.)

Holotype, Female: length, 2.5 mm.; tegmen, 4.3 mm.

Greenish-stramineous; two spots on vertex and impression in fork of median carina of frons orange. Tegmina translucent-ochraceous, a small round callus near Sc–R fork and another near Cu_1 fork piceous, a faint transverse stripe across middle of clavus, and apical veins at margin, brown. Wings yellowish hyaline, veins concolorous.

Third abdominal segment of male produced laterally in a narrowly conical process which is bent caudad. Anal segment very short, ring-like. Pygofer moderately long, longest at middle, laterodorsal angles not produced, posterior lateral margins broadly sinuate, ventral margin convex and oblique in profile, medioventral process absent; diaphragm sclerotised only laterally, devoid of armature in middle and not developed as a sclerotised bridge above base of genital styles. Aedeagus comprising a laterally-compressed plate, narrowing distad and strongly deflexed, recurved caudad at blunt apex; on right side of this a long slender spinose process, evenly curved ventrad and mesad distally, crossing the former process at apex. Genital styles rather long, vertical, very slightly curved, of subequal width from base to near apex, then abruptly bent caudomesad and slightly narrowed; apical margin shallowly concave, distal angles prominent, the lower especially so.

Holotype female, **Hong Kong, China,** Koebele, October, 1895, deposited in the California Academy of Sciences. Allotype male, and paratype female, Hong Kong, China, Koebele, deposited in the U. S. National Museum. This genus recalls *Arcofacies* but differs in the shape of the frons and in the relative size of the antennae, in the gibbous mesonotum, in the rela-

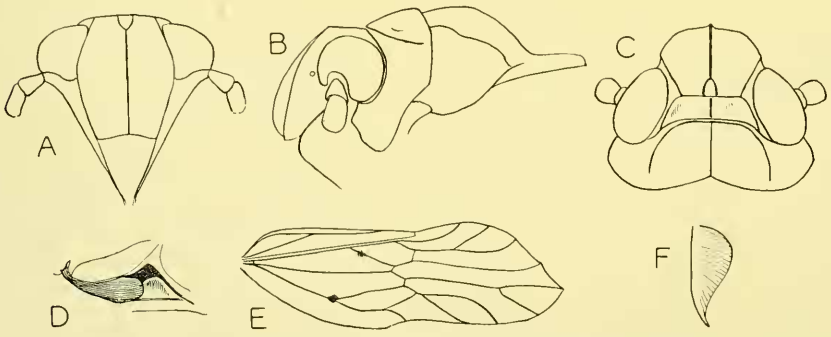


Fig. 7. *Arcofaciella verrucosa*, new genus and species: A, frons and clypeus; B, head and thorax, side view of dorsal half; C, vertex and pronotum; D, striated lobe anterodorsolaterally on third (apparently first) abdominal segment; E, tegmen; F, post-tibial spur.

tively larger pronotum, in the shape of the tegmina and in rostral proportions, and in the absence of a median carina on the clypeus.

The holotype and allotype of *Arcofacies penangensis* Muir are congeneric with *A. verrucosa* and this species must be termed *Arcofaciella penangensis* (Muir) comb. nov. It differs from *A. verrucosa* in its much larger size and in the shape of the frons, which is 1.6 times as long as broad, as contrasted with 1.4; in the less acute apex of the tegmina, and in the following details of the male genitalia: Anal segment with posterior lip deep, with latero-apical angles acute, as contrasted with lip shallow and angles obtuse and less produced; aedeagus with a deep transverse lobe dorsally at base (the corresponding lobe in *A. verrucosa* is much smaller); genital styles in profile strongly constricted in distal third before incurved apex (whereas in *A. verrucosa* from the same viewpoint they appear parallel-sided). The two species differ also in color, *A. penangensis* being much darker.

Tribe **Delphacini** Lambertie

Genus **Sardia** Melichar

Melichar, 1903:96. Haplotype, *Sardia rostrata* Mel.

Sardia rostrata Melichar.

Melichar, 1903:96.

One female, Vinglon District, Cochin-China, French Indo-China, Aug. 6–10, 1934; one female, Chizuka, Okinawa, July–Sept., 1945, G. E. Bohart and C. L. Harnage.

Genus **Nilaparvata** Distant

Distant, 1906:473. Orthotype *Delphax lugens* Stål (= *Nilaparvata greeni* Dist.)

Nilaparvata lugens (Stål).

Delphax lugens Stål, 1854:246.

Two males, Nam-ting-tseun (10 m. N.E. of Sam-ah-Kong), Yai-hsien District, Hainan Island, S. China, Feb. 10–11, 1935. A female from Mai-chan (1 hour by bus more or less west of Ch'ui-man), Suwen District, July 26, 1932, W. E. Hoffman, is referred to this species; one macropterous male, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, Aug. 20, 1948, Gressitt; eight macropterous males and eighteen macropterous females, Mokansan, Che-Kiang Province, Sept. 6, 1927, Mrs. D. E. Wright, are placed here; the genitalia also agree with figures of *N. oryzae* Mats. Two females, Rivière de Quangtri, Anam, April 30, 1927, Mrs. D. E. Wright, have the median carina of the frons interrupted in the middle of the disc by a transverse sulcus, and may possibly belong to another species.

Nilaparvata muiri China.
(Figure 8, S.)
Nilaparvata (?) *muiri* China, 1925:480.

One male, Chu-Chou Fu, Che-Kiang, China, Sept. 6, 1926, Mrs. D. E. Wright. A female, taken at 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, Aug. 20, 1948, by Gressitt is doubtfully assigned to this species. It differs from *N. muiri* China in the number of lateral spines on the basal segment of the post-tarsus (3) and in the venation of Cu in the tegmen, which is normal. The mesonotum just outside the base of each lateral carina is tumid.

Genus **Phyllodinus** Van Duzee

Van Duzee, 1897:240. Haplotype, *Eurysa nervata* Van Duzee, 1894:191

Phyllodinus luzonensis Muir.
(Figure 8, N, O.)
Muir, 1916:383.

One male and two females, all brachypterous, Rivière de Hue, Anam, Mrs. D. E. Wright, Mar. 16, 1927.

Phyllodinus macaoensis Muir.
(Figure 8, H, I.)
Muir, 1913:246.

One macropterous male and three macropterous females, Rivière de Quangtri, Anam (April 30, May 5, 1927): one brachypterous female, Rivière de Hue, Anam (Mar. 16, 1927), Mrs. D. E. Wright. This series agrees in all details with Muir's description of *P. macaoensis*: the genitalia differ from those of *P. nigromaculosus* Muir in the more tumid lateroapical areas of the anal segment, and in the shorter and stouter and markedly S-shaped genital styles, and in the coloration of the distal portion of the tegmina. The venation of the macropterous tegmina agrees with that described by Muir, though in one specimen the number of branches of Cu is two, not three. The position of the forking of the veins on the corium is variable, and anastomosis in various degrees may occur between Sc and R.

Genus **Dicranotropis** Fieber

Fieber, 1866:530. Logotype, *Delphax hamata* Boheman, 1847:45

Dicranotropis huensis.
(Figure 8, E–G.)

Male: length, 2.8 mm. Female: length, 2.8 mm. Brachypterous form: Stramineous; disc of frons and intercarinal areas of pronotal disc pale brown; genae below eyes, clypeus, lateral fields of mesonotum, pro- and mesocoxae except at base, a spot on metapleura, abdomen, except laterally, on eighth ventrite, distal margin of pygofer and tenth segment castaneous-

piceous. Tegmina dark castaneous-translucent, a spot at middle of claval margin, another at apex of clavus, and a narrow area overlying cross-veins between node and M hyaline or pallid.

Anal segment large, broad, ventral margin transverse, lateral angles produced ventrad in a spine. Pygofer with hind lateral margin in profile sinuate, more or less vertical, medioventrally a small tongue-like process from posterior margin on each side of middle line. Genital styles strongly S-shaped, twisted, broadest a third from apex. Aedeagus strongly laterally compressed, distal portion reflected anteriorly. Diaphragm devoid of ornamentation, dorsal margin shallowly concave.

One male and two females, Rivière de Hue, Anam, Mar. 16, 1927, Mrs. D. E. Wright. This species is distinguished by the shape of the genitalia.

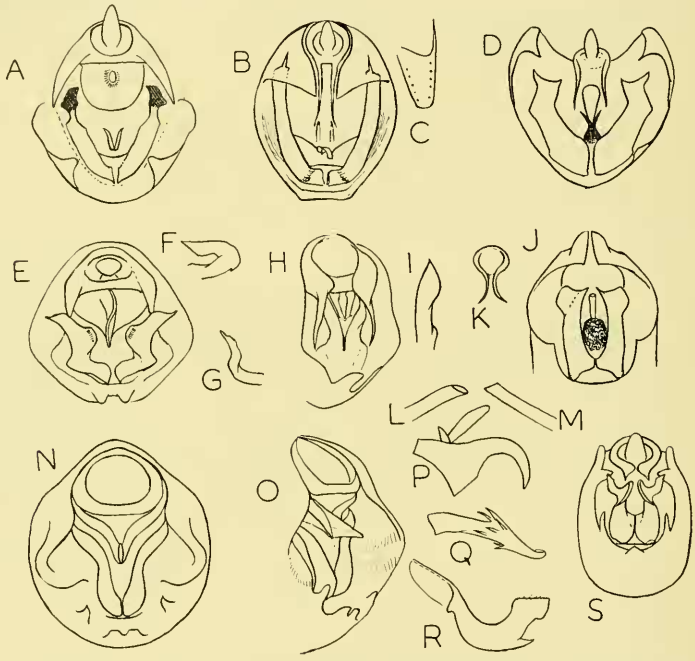


Fig. 8. *Unkanodes sapporona* Mats.: A, male genitalia; P, anal segment of male in profile; Q, aedeagus; R, genital style, lateral view. *Delphacodes inachus*, new species; B, male genitalia; C, aedeagus, lateral view. *Delphacodes shirozui* Ish.: D, male genitalia. *Dicranotropis huensis*, new species: E, male genitalia; F, apical portion of aedeagus; G, apical portion of genital style, lateral view. *Phyllodinus macaoensis* Muir: H, male genitalia, posterolateral view; I, apical portion of genital style. *Chloriona* (s.) *sirokata* M. & I.: J, male genitalia; K, anal segment of male, posterior view; L, M, aedeagus, left and right sides. *Phyllodinus luzonensis* Muir: N, O, male genitalia ,posterior and posterolateral views. *Unkanodes sapporona* (Mats.): P, anal segment of male in profile; Q, aedeagus, left side; R, left genital style. *Nilaparvata muiri* China: S, male genitalia.

Genus **Chloriona** Fieber

Fieber, 1866:519. Haplotype, *Delphax unicolor* H.–S., 1835:66

The writer recognizes that a wholly satisfactory subdivision of the concept *Chloriona* Muir, which embraces such different species as *Delphax unicolor* H.-S., *Delphax vitticollis* Stål (= *Chloriona turneri* Muir), and *Liburnia slossoni* Ball is likely to prove very difficult to achieve: to judge by material so far examined, it seems likely that one or two segregates can be made, but that these may show the same degrees of variation as found in *Ugyops*. In view of the frequency with which *Delphax furcifera* Horv. appears in literature it seems desirable to anticipate adequate revisionary treatment by segregating this species from the narrow concept of Fieber based on *Delphax unicolor*. It is likely to prove, on critical study, that the gap separating the two concepts is wide, and of generic significance: indeed, if it were merely a case of comparing the respective type species, this could be shown forthwith. As, however, it is not at present possible to bring forward a considered statement of the position of all the species involved, the writer here proposes to go no farther than to establish a new subgenus. For the convenience of students this subgenus is compared with certain existing genera some of which are not represented in the Chinese fauna.

Sogatella Fennah, new subgenus

Head little narrower than pronotum. Vertex slightly longer than broad, its width at base subequal to width of eye in same line, and exceeding two-thirds of its length, apical margin transverse interrupted by projecting submedian carinae of frons; carinae of vertex and frons slender and distinct. Frons longer than broad with median carina forked approximately at level of middle of eyes, lateral margins straight, subparallel. Antennae cylindrical, moderately short, basal segment distinctly longer than broad, second segment longer than first. Rostrum not attaining post-trochanters. Length of pronotum and mesonotum combined scarcely as long as maximum width of latter. Pronotum tricarinate, lateral discal carinae almost straight, strongly diverging basad, not reaching hind margin; not parallel with mesonotal carinae. Mesonotum tricarinate, longer than vertex and pronotum together. Legs terete, not at all compressed, rather slender, post-tibial calcar with about twenty small teeth, basal segment of post-tarsus devoid of spines along side.

Sogatella differs from the typical subgenus in the relatively narrower vertex, which in *Chloriona unicolor* H.-S. considerably exceeds the width of an eye, in the parallel lateral margins of the frons, in the proportions of the frons, in the slightly shorter combined length of the pronotum and mesonotum, and in the fewer teeth on the post-tibial spur, of which there are thirty

in the typical subgenotype. *Leptodelphax* Haupt has a relatively longer combined pronotum and mesonotum, while the medial carina of the frons is broadened basally, not forked. *Calligypona* has a relatively longer rostrum. *Kelisia* has a relatively shorter first antennal segment and slightly curved lateral frontal margins, while *Prokelisia* differs entirely in the shape of the head and pronotum.

Type of subgenus, *Delphax furcifera* Horv.

Chloriona (Sogatella) furcifera (Horvath).
Delphax furcifera Horvath, 1899:372.

Five males, nine females, and one mutilated specimen, 1,000 m. Suisapa, Lichuan District, W. Hupeh, China (Aug. 19–24, 1948; 1 male, Rivière de Hue, Anam, Mar. 16, 1927, Mrs. D. E. Wright; 1 male, Tunglu, Sept. 8, 1926, 7 females Mokansan, Che Kiang Province, China, Sept. 6–8, 1927, Mrs. D. E. Wright.

Chloriona (Sogatella) sirokata (M. & I.)
(Figure 8, J–M.)
Sogata sirokata Matsumura & Ishihara, 1945:64.

Male: length, 2.3 mm.; tegmen, 2.8 mm.

Fuscous; carinae of frons and clypeus, antennae, sides of clypeus, mesoscutellum, legs, and abdomen laterally ochraceous; posterior and ventral margin of pronotum ivory white. Tegmina hyaline, faintly infumed, veins testaceous-brown.

Median carina of frons forked at extreme base on dorsal surface of head. Post-tibial spur with twenty minute teeth.

Anal segment of male with a pair of diverging spines arising at middle of distal margin. Pygofer dorsolaterally much longer than ventrally, produced at dorsolateral angles and incurved, the distal part expanded and truncate parallel with truncate edge of opposite member, medioventral process absent, but a pair of bluntly tooth-like eminences on margin laterad of base of genital styles. Diaphragm thickened and umbonate medially, somewhat roughened. Genital styles moderately broad and flattened, shallowly curved, outer margin sinuate, inner margin concave, outer distal angle broadly and roundly lobate, inner distal angle acuminate. Aedeagus tubular, unornamented, of equal width throughout, and with orifice apical, oblique.

Two males, Rivière de Hue, Anam, Mar. 16, 1927 (Mrs. D. E. Wright).

Genus **Delphacodes Fieber**

Fieber, 1866:524. Logotype *Delphax mulsanti* Fieber, 1866:526

Delphacodes terryi Muir.
Muir, 1917:334.

Two macropterous males, Honam Island, Canton, China, May 4, 1932; White Cloud Mountain, Canton, China, Mar. 19, 1933.

Delphacodes shirozui Ishihara.

(Figure 8, D.)

Ishihara, 1949:53.

Median carina of frons forked at level of incipient curve into vertex. Post-tibial spur with sixteen teeth.

Anal segment small, a pair of long slender spines arising on each side of middle line on hind margin. Pygofer dorsally deeply emarginate, dorsolateral angles produced caudad, distally incurved, medioventral process absent, diaphragm armed medially with a bispinose sclerite. Genital styles sinuate on outer margin, concave on inner, apical angles bluntly pointed, distal margin shallowly concave. Aedeagus basally compressed, distally subcylindrical.

Two males, Lau-Chi, Che-Kiang, China, June 20, 1926, Mrs. D. E. Wright.

Delphacodes inachus Fennah, new species.

(Figure 8, B, C.)

MALE: length, 1.8 mm.; tegmen (brachypterous), 1.1 mm.

Vertex with median carina forked at base, on horizontal dorsal area. Antennae attaining level of frontoclypeal suture. Post-tibial spur with about eighteen teeth, basitarsus with an oblique row of five teeth and two separate teeth at proximal end of oblique row. Rostrum slightly surpassing mesotrochanters.

Fuscous-piceous; a few spots on apex of frons and anterior half of genae fuscous; carinae of vertex, frons, and clypeus, lateral fields of pronotum, and a broad line overlying median carina of pronotum and mesonotum pallid to white; disc of vertex, antennae, posterior area of genae and sides of clypeus, legs, except post-tibiae at base, abdomen at sides, and a ring around anal emargination of pygofer, testaceous.

Anal segment of male small, deeply sunk in emargination, with a pair of slender spines arising near middle line, directed ventrad. Pygofer narrowly but deeply emarginate above, laterodorsal angles broadly produced and inflected mesad, bluntly rounded, so that the cavity of the pygofer in posterior view is heart-shaped, a slight lenticular swelling in middle of lateral margin; medioventral process absent; diaphragm with armature carried near ventral margin of foramen, in form of a short lobe projecting caudad. Styles long, vertical, slightly swollen at base, slightly curved, produced in a spine at apex. Aedeagus V-shaped, much laterally compressed, widened near middle, acuminate distally.

One brachypterous male, **Suisapa, Lichuan District, W. Hupeh, China,** July 23, 1948, Gressitt. This species is distinguished by the shape of the genitalia.

Unkanodes Fennah, new genus

Rather slender. Head little narrower than pronotum. Vertex longer than broad, its width at base not exceeding width of an eye, shallowly rounded at apical margin; carinae of vertex and frons distinct. Frons longer than broad, with median carina forked only at extreme base. Antennae cylindrical, basal segment two and a half times as long as broad, at least half as long as second. Length of pronotum and mesonotum combined equal to maximum width of latter. Pronotum tricarinate, lateral discal carinae almost straight; very weakly curved laterad, not reaching hind margin and not in line with mesonotal carinae. Mesonotum longer than head and pronotum together, tricarinate. Legs terete, not at all compressed, post-tibial calear with about twenty-two teeth, basal segment of post-tarsus devoid of spines.

Type species, *Unkana sapporona* Mats.

Unkanodes sapporona (Mats.).
(Figure 8, P–R.)
Unkana sapporona Matsumura, 1935:74.

One male, Mokansan, Che-Kiang Province, China, probably collected by Mrs. D. E. Wright. The genitalia are figured.

This species, which has recently been transferred to *Delphacodes* by Ishihara (using *Delphacodes striatella* Fall. as the basis of reference for generic characters), is separated from *Delphacodes* by the characters given in the key above and from *Sogata* (interpreted strictly from the holotype of *S. dohertyi* Dist.) in the shorter vertex and frons and relatively very much shorter clypeus.

Family **MEENOPLIDAE** Muir

KEY TO GENERA OF CHINESE MEENOPLIDAE
(Adapted from Muir)

(1) (2) Claval veins uniting near apex of clavus; first claval vein strongly granulate; second not or weakly so, subparallel to commissural margin..(3)

(2) (1) Claval veins uniting near middle of clavus; first claval vein not granulate, second strongly so, curved.....*Anigrus* Stål

(3) (4) Clypeus devoid of lateral carinae.....*Nisia* Mel.

(4) (3) Clypeus laterally carinate.....*Eponisia* Mats.

Genus **Nisia** Melichar

Melichar, 1903:53. Haplotype, *Meenoplus atrovenosus* Leth.

Nisia atrovenosa (Leth.).
(Figure 9, A–C.)
Meenoplus atrovenosus Lethierry 1888:466.

One female, Cheung-Mu-Tsang, 50 km. northwest of Chungking, China,

on citrus, Gressitt, July 8, 1948; 1 mutilated specimen, Rivière de Quangtri, Anam, Mrs. D. E. Wright, April 30, 1927; 1 male, 1 female, Rivière de Hue, Anam, Mrs. D. E. Wright, March 16, 1927; 7 females and 7 mutilated specimens, Tunglu, Che-Kiang Province, Mrs. D. E. Wright, Sept. 8, 1926; one female, same locality, Mrs. D. E. Wright, Sept. 10, 1926; 1 mutilated specimen, Mokansan, Che-Kiang Province, Mrs. D. E. Wright, Sept. 10, 1927.

Nisia suisapana Fennah, new species.
(Figure 9, D–F.)

FEMALE: length, 2.2 mm.; tegmen, 3.0 mm.

Tegmina 2.1 times as long as broad, broadest at level of stigma, anterior margin convex, not indented at node, anterior branch of M simple at apex; post-tibiae 8-spined at apex, basal metatarsal segment 7-spined, second metatarsal segment with 5 spines.

Stramineous, probably powdered white in life, abdomen pale fuscous, eyes and spines on legs black. Tegmina sordid white marked with pale fuscous as figured. Wings white, veins pallid.

Third valvulae of ovipositor in profile with dorsoapical lobe well developed, about as broad as long.

One female, **1,000 m. Suisapa, Lichuan District, W. Hupeh, China,** Gressitt, Aug. 20, 1948. This species differs from all others in the tegminal markings: it is superficially nearest to *N. albovenosa* Dist.

Genus **Eponisia** Matsumura

Matsumura, 1914:285. Orthotype, *Eponisia guttula* Mats.

Eponisia guttula Mats.
Matsumura, 1914:286.

Post-tibiae 8-spined at apex, basal metatarsal segment 7-spined, second metatarsal segment 6-spined.

One female, Mokansan, Che-Kiang Province, Mrs. D. E. Wright, Sept. 6,

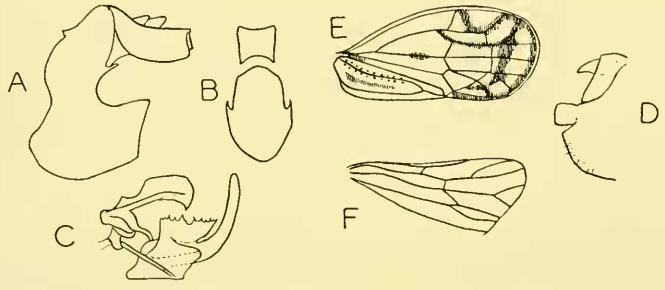


Fig. 9. *Nisia atrovenosa* Leth.: A, anal segment and pygofer, left side; B, ditto, posterior view; C, aedeagus, left side. *Nisia suisapana*, new species: D, anal segment and external genitalia of female, right side; E, tegmen; F, anterior portion of wing.

1927, is considered to be a geographical representative of this species. The infuscate markings on the tegmina are very pale.

Genus **Anigrus** Stål

Stål, 1866:172. Logotype, *Anigrus sordidus* Stål, 1866:173

Anigrus nigricans (Mats.).

Paranisia nigricans Matsumura 1914:285.

Post-tibiae 8-spined, basal metatarsal segment 6-spined, second metatarsal 5-spined. Tegmina with anterior margin yellowish-brown, apical and commissural margins fuscous.

One female, Mizuho, Formosa, Gressitt, April 22, 1932.

Family **KINNARIDAE** Muir

Genus **Kinnara** Distant

Kinnara, Distant, 1906:39. Orthotype, *Pleroma ceylonica* Melichar, 1903:42

Pleroma Melichar, 1903:41

Kinnara fumata Mel.

Melichar, 1903:42.

One male, 1,000 m., Suisapa, Lichuan District, W. Hupeh, July 25, 1948. Gressitt.

Family **DERBIDAE** Spinola

KEY TO GENERA OF CHINESE DERBIDAE

(1) (2) Tegmina with clavus closed, second cubital vein reaching hind margin directly, frons narrow, not strongly laterally compressed ..... (3)

(2) (1) Tegmina with clavus open; second cubital vein curving into subapical transverse line of cross veins: frons strongly laterally compressed ..... (5)

(3) (4) Pronotum with a distinct median disc bounded laterally by carinae; frons little longer than broad, margins convex, antennae and apical segment of rostrum long ..... *Vinata* Dist.

(4) (3) Pronotum without a distinct median disc, frons much longer than broad, margins concave, antennae and apical segment of rostrum short ..... *Vekunta* Dist.

(5) (6) Wings not more than half as long as tegmina, usually narrow or reduced with stridulary organ on reduced anal lobe ..... (7)

(6) (5) Wings more than half as long as tegmina, ampliate ..... (15)

(7) (8) Tegmina with all median sectors single, usually 6; antennae usually shorter than frons ..... (9)

(8) (7) Tegmina with five median sectors, one furcate ..... (11)

(9) (10) Basal median cell narrow, wings about half as long as tegmina, apex rounded; antennae much shorter than frons ..... *Proutista* Kirk.

(10) (9) Basal median cell wide and short, not more than 3.5 times as long as broad, wings much less than half as long as tegmina, acute at apex..... *Diostrombus* Uhl.

(11) (12) Second or third median sector forked, base of clypeus in profile straight ..... *Pamendanga* Dist.

(12) (11) First median sector with two to four branches..... (13)

(13) (14) Posterior margin of tegmina undulate..... *Losbañosia* Muir

(14) (13) Posterior margin of tegmina not undulate..... *Zoraida* Kirkaldy

(15) (16) Tegmina less than 2.5 times as long as broad, clavus closed or nearly so ..... *Rhotana* Wlk.

(16) (15) Tegmina more than 2.5 times as long as broad, clavus open..... (17)

(17) (18) Media arising from radius distad of Sc + R + M fork; lateral carinae of vertex and frons very large..... *Megatropis* Muir

(18) (17) Media arising from R or basad of Sc + R fork..... (19)

(19) (20) Sc + R fork at or basad of middle of tegmen, subcostal cell elongate in profile, vertex and frons meeting in a distinct angle.... *Kamendaka* Dist.

(20) (19) Sc + R fork distad of middle, subcostal cell short, in profile head broadly ovate, no evident point of union of vertex and frons..... *Vivaha* Dist.

Genus **Losbañosia** Muir

Muir, 1917:85. Haplotype, *Losbañosia bakeri* Muir

Losbañosia bakeri Muir.

Muir, 1917:86.

One female, Lung-Tau Shan, N. Kwangtung, China, Gressitt, June 11, 1947.

Genus **Diostrombus** Uhler

Uhler, 1896:283. Haplotype, *Diostrombus politus* Uhl.

Diostrombus politus Uhl.

Uhler, 1896:284.

Post-tibiae 4-spined at apex, basal metatarsal segment 7-spined, second metatarsal 9-spined.

Twenty-five males and 23 females, Cheung-Mu-Tsang, 50 km. northwest of Chungking, China, July 8, 1948, Gressitt. It is evident from the collection data that adults were "swarming" at the time of collection.

Genus **Zoraida** Kirkaldy

Kirkaldy, 1900:242. Orthotype, *Derbe sinuosa* Boheman, 1838:225

Zoraida kirkaldyi Muir.

(Figure 11, A–E.)

Muir, 1918:205.

Lateral submargins of frons each longitudinally shallowly suleate so that

frons between eyes is more than two-thirds width of an eye in frontal view. Post-tibiae with 1 spine laterally, 5 apically, basal metatarsal segment 6-spined at apex, second metatarsal 6-spined.

Two males and 1 mutilated specimen, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, August 20, 1948, Gressitt.

Genus **Pamendanga** Distant

Distant, 1906b:298. Orthotype, *Pamendanga rubilinea* Dist., 1906:299

Pamendanga sauterii Muir.

Paraproutista sauterii Muir, 1915:131.

Aedeagus broad, shallowly scoop-like; ventrally on right a moderately short spine curved laterad and caudad, a large thin elongate triangular lobe, acuminate at tip, directed caudad at apex of aedeagus, a spine dorsolaterally on left a little before apex, directed anteriorly, ventrally, in posterior view, a pair of short triangular eminences slightly to left of middle line.

Post-tibiae unarmed at sides, with 5 spines at apex, basal metatarsal segment 4-spined, second metatarsal segment 3-spined.

One male (mutilated) and 2 females (one mutilated), 1,000 m., Suisapa, Lichuan District, W. Hupeh, China; male, July 23; females, July 23, 25, 1948, Gressitt.

Genus **Rhotana** Walker

Walker, 1857:160. Haplotype, *Rhotana latipennis* Walker, 1857:160

Rhotana maculata Mats.

(Figure 10, D.)

Matsumura, 1914:295.

Post-tibiae 4-spined at apex, basal metatarsal segment 5-spined, second metatarsal 4-spined.

One male, Mokansan, Che-Kiang Province, Mrs. D. E. Wright, Sept. 16, 1927. This identification requires confirmation. The specific characters of the tegminal venation are figured.

Rhotana satsumana Mats.

(Figure 10, A, B, E.)

Matsumura, 1914:294.

Two mutilated specimens, Mokansan, Che-Kiang Province, Mrs. D. E. Wright, Sept. 6, 10, 1927.

In the material before the writer the lateral carinae of the frons are

strongly divergent and actually separated from the level of the lower margin of the eye.

Rhotana satsumana contracta Fennah, new subspecies.
(Figure 10, C.)

Female: length, 3.3 mm.; tegmen, 6.0 mm.

Lateral margins of frons contiguous to well below level of eyes, not strongly divergent until below level of antennae. Tegmina with basal venation of M and Cu as figured. Posterior margin of pregenital sternite triangularly produced medially, subrectangulate at apex.

Stramineous, powdered pallid. Tegmina translucent, powdered white, basal third except in middle of intervenal areas, an areuate fascia from middle of costal margin to apex of clavus subparallel to apical margin of tegmen, a narrow band on each side of, though separated from, apical line of transverse veins passing posteriorly into a large suffusion, pale fuscous; veins yellow, red where transversing infuscate or pigmented areas. A yellow suffusion bordering subapical line of transverse veins in anterior four cells. Wings infumed pale fuscous, white along apical margin, a short areuate dark spot interrupted by union of M–Cu cross vein and Cu_{1a}.

Described from one female, **1,000 m., Suisapa, Lichuan District, W. Hupeh, China,** July 24, 1948, Gressitt. This subspecies is distinguished by the shape of the lateral carinae of the frons and by the tegminal venation. A single female from Hainan Island (*en route* Cheung-kon-ts'uen to Tai pin-ts'uen, Kiung-Shan District, July 19, 1935) is doubtfully ascribed to this species; its points of difference (in tegminal venation and the shape of the black spot on the wings) are figured to facilitate recognition.

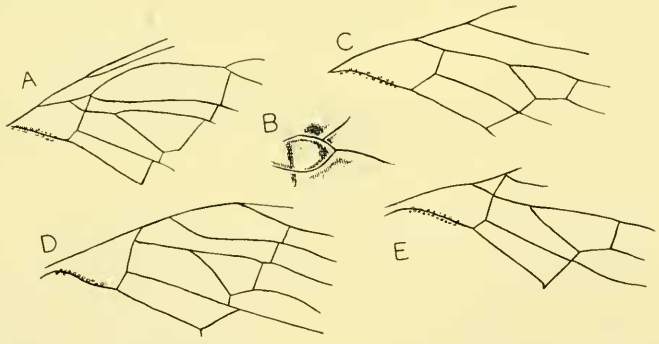


Fig. 10. *Rhotana satsumana* Mats.: A, tegminal venation at base of *M* (Hainan Island specimen); B, spot on wing (Hainan Island specimen); E, tegminal venation in *M* (Mokansan specimen); C, *contracta*, new subspecies, tegminal venation in *M*. *Rhotana maculata* Mats.: D, tegminal venation at base of *M*.

Genus **Vivaha** Distant

Distant, 1906b:307. Orthotype, *Vivaha facialis* Dist.

Vivaha facialis Dist.
(Figure 13, A–C.)
Distant, 1906b:308.

Post-tibiae with 6 spines at apex, basal metatarsal segment 4-spined, second metatarsal segment bispinose.

One male and 1 female, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, Gressitt, Aug. 19, 1948.

Genus **Megatropis** Muir

Muir, 1913:57. Orthotype, *Megatropis coccineolinea* Muir, 1913:57

Megatropis formosana (Mats.).
Mesotiocerus formosanus Matsumura, 1914:301.

Post-tibiae 6-spined at apex, basal metatarsal segment 4-spined, second metatarsal 2-spined.

One mutilated male and 7 females, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, July 23, 24; Aug. 23, 1948, Gressitt. The series agrees so closely with Matsumura's description and figures that no subspecific differentiation is apparent.

Genus **Kamendaka** Distant

Distant, 1906b:310. Orthotype, *Kamendaka spectra* Dist.

Kamendaka spectra Dist.
(Figure 11, F, G.)
Distant, 1906:311.

Post-tibiae laterally unarmed, apically with 5 spines; basal metatarsus 6-spined, second metatarsus 5-spined.

One male taken on ridge, 1,200–1,500 m., Suisapa, Lichuan District, W. Hupeh, China, July 25, 1948, Gressitt.

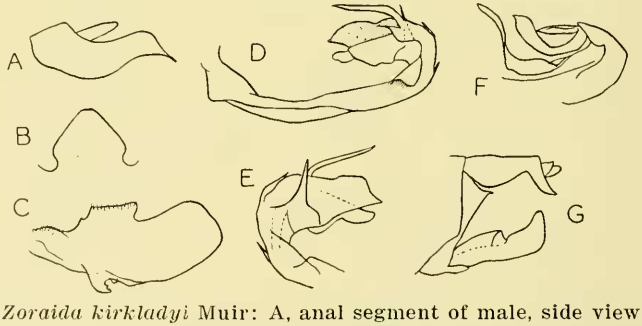


Fig. 11. *Zoraida kirkladyi* Muir: A, anal segment of male, side view; B, medioventral process of pygofer; C, genital style; D, aedeagus, left side; E, apex of aedeagus, right side. *Kamendaka spectra* Dist.: F, apical portion of aedeagus, left side; G, anal segment, pygofer, and left genital style.

Kamendaka (Eosaccharissa) nigromaculata Dist.

Chaprina nigromaculata Distant, 1911:645.

Post-tibiae laterally unarmed, apically with 11 spines, basal metatarsal segment 9-spined, second metatarsal segment 8-spined.

One male and two females, Rivière de Hue, Anam, Mar. 16, 1937, Mrs. D. E. Wright.

Genus **Vekunta** Distant

Distant, 1906:8. Orthotype, *Vekunta tenella* Melichar, 1903:41

KEY TO SPECIES OF VEKUNTA

(1) (2) Tegmina unicolorous, subopaque, pallid yellowish or creamy white....(3)

(2) (1) Tegmina infuscate or with dark suffusion, or with fuscous markings....(7)

(3) (4) Wings white, or subhyaline powdered white....(5)

(4) (3) Wings infuscate with darker veins. Philippine Islands....*V. palawanensis* Muir

(5) (6) A fuscous-piceous spot on propleura; wings white with white veins. Formosa?....*V. albipennis* Mats.

(6) (5) No dark spot on propleura; wings hyaline-white with veins distally greyish brown. China....*V. nivea*, new species

(7) (8) Tegmina subhyaline, sordid white, veins pallid, most cells suffusedly bordered with pale sepia-brown. Formosa....*V. lyricen*, new species

(8) (7) Tegmina not as above....(9)

(9) (10) Tegmina pale, conspicuously bordered fuscous or fuscous piceous along costal margin and sutural margin, or at least along sutural margin of clavus, often with apical margin also dark in part....(11)

(10) (9) Tegmina without distinct marginal infuscation as above, usually with a general rather dark ground color, occasionally of light hue....(17)

(11) (12) Tegmina with a piceous mark over subcostal cell and apex of costal cell. Formosa....*V. nigrolineata* Muir

(12) (11) Tegmina not marked as above....(13)

(13) (14) Tegmina with a narrow fuscous band from radial cross vein to apex, apical margin fuscous....(15)

(14) (13) Tegmina without such band in R....(43)

(15) (16) Tegmina with costa dark fuscous. Java....*V. hyalina* Muir

(16) (15) Tegmina with corium and veins anterior to R milky-white....*V. nigrinervis* Schmidt

(17) (18) Tegmina subhyaline, tinged yellow, with yellowish veins, stigma hyaline, a small dark spot near apex of costa, apical veins infumed at tip, apical margin infuscate in female. Formosa....*V. maculata* Mats.

(18) (17) Tegmina more or less generally suffused fuscous, or very dark....(19)

(19) (20) Tegmina piceous, costa yellowish, a small yellow spot at stigma. Assam....*V. flavipes* Muir

(20) (19) Tegmina not piceous, and not so marked....(21)

(21) (22) Tegmina with costal cell, at least anteriorly, pallid for most of its length; remainder of corium infuscate....(23)

(22) (21) Costal cell wholly infuscate, or infuscate to near apex.....(27)

(23) (24) A black spot on propleura laterally. Ceylon.....*V. punctula* Mel.

(24) (23) No black spot on propleura.....(25)

(25) (26) General body color yellow; tegmina brownish yellow, disc of vertex not hollowed or markedly depressed. Ceylon.....*V. tenella* Mel.

(26) (25) General body color castaneous; tegmina dark brown with a pallid oblong fleck at node; disc of vertex rectangulately hollowed out. Formosa.....*V. stigmata* Mats.

(27) (28) Tegmina with a dark spot adjoining a pallid spot at costal margin.....(29)

(28) (27) Tegmina unicolorous, or if with a pallid spot, with no dark spot adjacent to it.....(31)

(29) (30) A hyaline spot on costal margin at node, a piceous spot just distad of it, and an oblique pallid stripe adjoining. Sumatra.....*V. nitida* Bierm.

(30) (29) A yellowish patch at end of costal cell, reaching from costa to media, with a dark spot in middle of it.....*V. badia* Muir

(31) (32) Tegmina unicolorous, translucent brown.....(33)

(32) (31) Tegmina paler at, or near, stigma, or if not then with veins very dark, but paler distally.....(35)

(33) (34) Mesopleura fuscous; transverse carinae of vertex testaceous; legs yellow with tibiae apically and tarsi medially and apically black. Formosa.....*V. botelensis* Mats.

(34) (33) Pleura with a round black spot; carinae of vertex fuscous, legs yellowish. Formosa.....*V. makii* Muir

(35) (36) Mesonotum light brown on disc, darker laterally.....(37)

(36) (35) Mesonotum fuscous-piceous or black.....(41)

(37) (38) Vertex 1.5 times as long as broad; tegminal veins sordid yellow. Formosa.....*V. shirakii* Mats.

(38) (37) Vertex as long as broad, or if not, then tegminal veins dark fuscous.....(39)

(39) (40) Tegminal veins sordid yellow; anal segment of male terminating in a small point. Japan and China.....*V. malloti* Mats.

(40) (39) Tegminal veins dark fuscous; anal segment of male slightly emarginate at apex. Formosa.....*V. umbripennis* Muir

(41) (42) Tegmina with a small pale translucent spot at apex of costal cell; veins unicolorous throughout. Java.....*V. pseudobadia* Muir

(42) (41) Tegmina fuscous; veins very dark, paler toward apex. Formosa.....*V. atripennis* Mats.

(43) (44) Clypeus with a black spot in middle; a black spot on propleura; margins of tegulae dark. Philippine Islands.....*V. lineata* Mel.

(44) (43) Clypeus without a black spot in middle; an oval black spot on both propleura and metapleura. Formosa.....*V. kotoshonis* Mats.

Vekunta nivea Fennah, new species.

(Figure 12, A–E.)

Male: length, 3.5 mm.; tegmen, 4.9 mm. Female: length, 3.0 mm.; tegmen, 4.5 mm.

Vertex across base 1.33 times length in middle line. Post-tibiae unarmed

laterally, 7-spined at apex, basal metatarsal segment 6-spined, second metatarsal segment 6-spined.

Stramineous; mesonotum and pregenital sternite tinged yellowish brown, a fuscous-piceous spot on mesothoracic pleurites, a paler fuscous spot laterally on metathoracic pleurites, apical segment of rostrum pale, its apical disc black. Tegmina hyaline, entire membrane distad of stigma faintly suffused with yellow, veins pallid, faintly yellow in membrane, anterior part of apical margin faintly tinged orange. Wings hyaline, veins greyish-brown distally. Insect in life powdered white.

Pregenital sternite of female shallow, transversely sulcate, distally produced and directed upward in a broad subtriangular process of the shape figured.

Anal segment of male long, narrow, broadly longitudinally sulcate, apically deflexed and recurved below to point cephalad. Aedeagus dorsally with a short medial spine at base directed upward and to left, a long medial spine at apex directed cephalad with a minute tooth on left at its base; on right side a long sinuate spine directed caudad, at apex of flagellum a short tooth-like plate directed upward and cephalad. Genital styles long, curved dorsad and mesad distally, of subequal width throughout, a pyramidal eminence applied to inner face at middle, this eminence terminating dorsally in a single blunt tooth, ventral angles setose-toothed.

Described from 1 male and 4 females, **Mokansan, Che-Kiang Province, China,** Mrs. D. E. Wright, Aug. 29, Sept. 16, Sept. 22, 1927.

This species is distinguished by the combined characters of a pitchy mesothoracic spot, and generally pallid color.

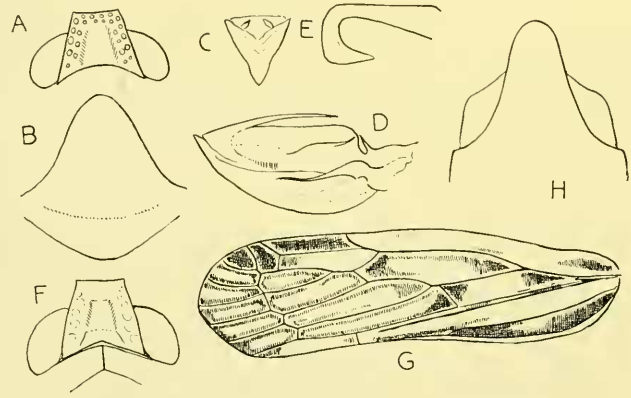


Fig. 12. *Vekunta nivea*, new species: A, vertex; B, pregenital sternite of female; C, apex of anal segment of male, posterior view; E, ditto, side view; D, aedeagus, side view. *Vekunta lyricen*, new species: F, vertex; G, tegmen; H, pregenital sternite of female.

Vekunta lyricen Fennah, new species.
(Figure 12, F–H.)

Female: length, 3.5 mm.; tegmen, 5.1 mm.

Reddish-brown; lateral margins of frons, apex of rostrum, a band adjoining median carina of mesonotum on each side, abdomen and genitalia, fuscous; pronotal disc, a broadening band from eye to and across tegula, a longitudinal submedian band on mesonotum, pallid yellow, mesoscutellum salmon-pink, tibiae and tarsi testaceous-fuscous.

Tegmina greyish-hyaline, veins pallid, most cells incompletely but clearly bordered sepia. Wings rather sordid white, veins concolorous basally, pale sepia distally.

Pregenital sternite produced in a narrowly triangular process, almost semicircularly rounded at apex, directed caudo-dorsad.

One female, 1,000 m., **Musha (Wuse) to Bandai, Taichung District, Formosa,** Gressitt, August 24, 1947. This species does not possess any obvious spot on the mesothoracic pleurites, and the tegminal markings do not agree with those of any species so far described in the genus.

Genus **Vinata** Distant

Distant, 1906a:8. Orthotype, *Erana operosa* Walker, 1857:151

Vinata sp. nr. **nigricornis** Stål.

One female, Lu-ling-paai, Yaoshan, Lin-Hsien District, Kwangtung, Oct. 1–2, 1924.

Post-tibiae 7-spined at apex, basal metatarsal segment 6-spined, second metatarsal 6-spined.

Family **ACHILIDAE** Stål

KEY TO GENERA OF CHINESE ACHILIDAE

(1) (2) Pronotal disc elongate, three-quarters length of mesonotum, no median carina on mesonotum; hind wing markedly notched at Cu_2 ..... *Rhotala* Walk.

(2) (1) Pronotal disc relatively shorter, mesonotum medially carinate, apical margin of hind wing entire ..... (3)

(3) (4) Vertex less than two-thirds as wide as pronotum; tegmina with numerous apical longitudinal veins ..... *Faventilla* Metc.

(4) (3) Vertex at least two-thirds as wide as pronotum; tegmina with about seven apical veins at margin distad of Sc ..... (5)

(5) (6) Width of vertex measured at base of middle line at least twice length along middle; M_{1-2} forking at apical transverse line ..... *Plectoderoides* Mats.

(6) (5) Width of vertex not twice length along middle ..... (7)

(7) (8) Vertex devoid of a carina across apex, or with median carina prominent and apical transverse carina obsolete ..... (9)

(8) (7) Vertex with one or more distinct carinae at apex ..... (11)

(9) (10) Vertex not distinctly produced before eyes, about as wide at apex as at base, lateral discal carinae of pronotum concave, curved laterad, not reaching hind margin ..... *Tangina* Mel.

(10) (9) Vertex not as above, lateral discal carinae of pronotum straight, reaching basal margin ..... *Akotropis* Mats.

(11) (12) Vertex with a single distinct carina across apex ..... (13)

(12) (11) Vertex with two transverse carinae between frons and vertex, confluent in middle but separating sublaterally to enclose a more or less distinct triangular facet ..... (17)

(13) (14) Vertex 3 times as wide across base as long in middle line.. *Zathauma* Fenn.

(14) (13) Vertex relatively narrower ..... (15)

(15) (16) Vertex produced before eyes for one- to two-thirds length of eye, in profile meeting frons acutely, lateral carinae of frons not as eminent as median carina, almost meeting acutely at base ..... *Betatropis* Mats.

(16) (15) Vertex produced before eyes for scarcely half their length, in profile meeting frons subrectangulately, lateral carinae of frons more prominent than median carina ..... *Caristianus* Dist.

(17) (18) Vertex medially carinate throughout, disc little depressed, if at all; tegmina with Sc and R together with six or seven veinlets at margin near stigma; no transverse callus on mesonotal disc ..... *Usana* Dist.

(18) (17) Vertex medially carinate only in basal two-thirds, or less, lateral margins strongly raised; mesonotum with a transverse callus on anterior third of disc, tegminal venation not as above ..... *Magadha* Dist.

Genus **Faventilla** Metcalf

Metcalf, 1948:60. Orthotype, *Cixius pustulatus* Walker, 1857:146

Faventilla spp.

One mutilated specimen, 250–300 m., Tao-kok-wan, Lung tau Shan, Kwangtung Province, S. China, Sept. 6, 1947, Gressitt. Dr. China, who kindly compared this and the following with Walker's types in the British Museum, points out that this "comes closest to *F. pustulata* Walker but

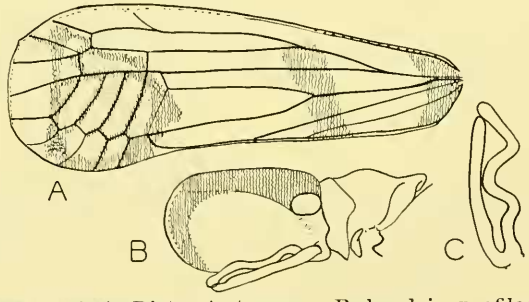


Fig. 13. *Vivaha facialis* Dist.: A, tegmen; B, head in profile; C, antenna.

differs in the venation (Sc + R stalk being much shorter), in the absence of the three black spots on the tegmen and of the large black spot on the side of the propleuron."

One female, 2,800 ft., Big Pool, Loh Fau Shan, Kwangtung, Oct. 13, 1935, E. R. Tinkham, "resembles *F. guttifer* Walker in size and color, particularly the pale greenish-yellow color. It differs, however, in the much shorter anteriorly-rounded vertex. In *F. guttifer* Walker the vertex is nearly as long as wide at base with the anterior margin angulate where the mid-facial carina meets it."

Genus **Usana** Distant

Distant, 1906:293. Orthotype, *Usana lineolalis* Dist.

Usana lineolalis Dist.

Distant, 1906:294.

Male: length, 3.0 mm.; tegmen, 4.5 mm. Female: length, 3.5 mm.; tegmen, 5.0 mm.

Stramineous to testaceous, a linear mark on each side of middle line of vertex, a round spot on lateral lobes of pronotum, a spot on tegulae and on mesopleura, a faint spot on mesonotal disc near base of lateral carinae fuscous. Tegmina yellowish-translucent, powdered grey, stigmal cells and all apical cells at margin fuscous, veins concolorous, stigmal veins and apical veins near margin ivory-white. Wings slightly infuscate, veins fuscous.

Post-tibiae 7-spined at apex, basitarsus 7-spined distally, second post-tarsal segment 6-spined.

Anal segment short, broad, lateral margins convex, apical margin excavate, lateroapical angles produced and deflexed. Pygofer with a short finger-like process laterally on hind margin near anal segment. Genital styles broad bearing at middle of dorsal margin a trispinose lobe. Aedeagus subtubular, flattened on dorsal surface, keel-like below, a spine arising at apex in middle line directed ventrocephalad below aedeagus; laterally at apex a flange-like lobe projecting laterad; on right a pair of vertical lobes, one overlapping the other, both concave on anterior margin.

Twelve males, 13 females and 3 mutilated specimens, Mokansan, Che Kiang Province, China, Aug. 24–Sept. 19, 1927, Mrs. D. E. Wright.

One female, Tai-ka, Tin-tong, Loh-chang District, Kwangtung, S. China, Aug. 18, 1947. The series differs from the type only in the less definite mottling of the corium along the veins.

Genus **Magadha** Distant

Distant, 1906:290. Orthotype, *Cixius flavisigna* Walker, 1851:348

Magadha metasequoiae Fennah, new species.

Female: length, 4.8 mm.; tegmen, 6.8 mm.

Tegmina with costal vein close to margin throughout. Fuscous; vertex,

except for a spot in each half of disc, about seven spots laterally on frons and a diffuse transverse bar across middle, clypeus broadly at base, narrowly at apex, disc and carinae of pronotum, dorsal half of tegulae and lateral angles of mesonotum, femora at base and apex, tibiae at base, middle and apex, and posterolateral margins of abdominal ventrites, ivory-yellow to stramineous; a sprinkling of small round spots on disc of frons testaceous. Tegmina ivory-hyaline, about eight marginal spots in costal cell, two of which are included in a broad fascia extending across to second claval vein, a broken diffuse fascia from fork of Cu_1 to stigma, apical cells of Sc, R and M at least at margin and a narrow interrupted fascia following distal cross-veins, fuscous or fuscous-piceous. Wing infuscate, veins fuscous.

Seventh sternite transverse posteriorly, tumid sublaterally, and with an eminence medially, hollowed out on its posterior face.

Eighth segment with ventro-lateral pieces directed medially, tapering to bluntly-rounded apex.

Post-tibiae with a single spine near base, six short teeth and one long at apex, basal metatarsus with six apical teeth, second metatarsal also with six.

One female collected from *Metasequoia glyptostroboides*, **1,000 m. Suisapa, Lichuan District, W. Hupeh, China**, Aug. 21, 1948, Gressitt. This species is distinguished from all described species of *Magadha* by coloration and from *Kempiana maculata* Muir by the absence of a pre-costal area in the tegmen, by coloration of the tegmina, and by size.

Magadha denticulata Fennah, new species.
(Figure 14, A–D.)

Male: length, 3.6 mm.; tegmen, 5.0 mm. Female: length, 3.2 mm.; tegmen, 5.0 mm.

Vertex about 1.5 times as broad across base as long in middle line. Tegmina with Sc + R fork slightly distad of Cu_1 fork, $M_1 + 2$ not forked before distal transverse line of cross veins. Post-tibiae with a tooth laterally in basal third, seven-toothed at apex, basal metatarsal segment 7-toothed, second metatarsal 6-toothed.

Fuscous; vertex at base and apex, six spots on each lateral margin of frons and a short transverse bar one-fifth from apex, clypeus at base and apex, carinae of pronotum, lateral angles of mesonotum and apex of scutellum, femora at apex, and tibiae at middle and apex stramineous or pallid ochraceous, mesonotal disc with a pair of more or less distinct ocellate spots at basal third. Tegmina sordid ochraceous, veins including costa, pale regularly spotted with fuscous, two spots in costal cell, stigma, apex of clavus, and apical cells at base and apex, fuscous. Wings infuscate, veins darker.

Anal segment of male triangular, slightly broader than long, Pygofer

with lateral margin with a semilunate lobe, medioventral process bifid, each lobe acuminate. Aedeagus produced laterally on left side at base in a short plate, toothed on margin, medially and dorsally at base a vertical plate, slightly inclined to right, phallobase distally broad, produced laterally on right in a subtriangular process, toothed at its apex.

Posterior margin of seventh sternite transverse. Ventrolateral angle of posterior margin of eighth segment in ventral view only slightly acute.

Two males (one the type) and six females, **1,000 m. Suisapa, Lichuan District, W. Hupeh,** Aug. 20–24, 1948, Gressitt. In this species the laterobasal facets of the frons are very feebly demarcated on their ventral margin. In the males there is a feeble round impression; the texture of the anterior third of the mesonotum differs from that of the posterior two-thirds. The species differs from typical *Magadha* and also from *Francesca* in venation, as $M_1 + 2$ does not fork basad of the distal transverse line. From *Francesca* it also differs in the broader vertex. It is close to *M. formosana* Mats.

One male, 250–350 m., Tso-kok-wan, Lungtau Shan, Kwangtung Province, June 9, 1947, Gressitt is also placed here.

Magadha cervina Fennah, new species.
(Figure 15, A–E.)

MALE: length, 3.0 mm.; tegmen, 4.0 mm.

Laterobasal triangular facets of frons moderately distinct. Post-tibiae laterally unispinose, apically 8-spined, basal metatarsal segment 7-spined, second metatarsal 6-spined.

Reddish-brown; six spots along lateral margins of frons, apex of clypeus, a spot on sides of clypeus, pronotal areolets, a stripe on post-tibiae near base, fuscous; hind legs otherwise stramineous. Tegmina translucent, powdered sordid greyish-yellow, veins concolorous, regularly spotted fuscous, a few small round spots in membrane, apical cells at base and apex fuscous. Wings slightly infuscate, veins darker.

Anal segment of male much broader than long, lateroapical angles decurved and produced in a stout spine. Pygofer with medioventral process broad, its lateroapical angles produced into short lobes, distally incurved, apical margin excavate with two minute eminences near middle. Aedeagus with phallobase four-lobed, as figured, two lobes simple, spinose, one with two spines and one with three and a blunt eminence; phallic appendages minutely denticulate over whole of distal surface. Genital styles bluntly ovate, a large three-toothed lobe dorsally near base.

One male **1,500 m., Shin-kai-sze, Omai Shan; Szechuan, W. China,** Aug. 16, 1940, Gressitt. This species is distinguished by coloration and by the shape of the male genitalia.

Genus **Plectoderoides** Matsumura

Matsumura, 1914:281. Orthotype, *Plectoderoides maculatus* Mats., 1914:282

Plectoderoides flavovittatus Fennah, new species.
(Figure 14, E–I.)

MALE: length, 2.8 mm.; tegmen, 3.5 mm. FEMALE: length, 3.0 mm.; tegmen, 4.8 mm.

Post-tibiae with a spine laterally near base, seven spines at apex. Basal metatarsal segment with seven spines at apex, second segment with six.

Yellow stramineous; a transverse bar on frons at base and at apex, a similar bar across clypeus, two bars on genae, disc of vertex on each side of median carina, pronotum with a stripe on each side of median carina, a stripe behind eyes, and another across lateral lobes, mesonotum, except laterally, a spot medioposteriorly on tegulae, bases of pro- and mesocoxae, two bands on each mesopleuron, dark reddish-brown. Tegmina translucent-fuscous, costal and subcostal cells to stigma, apical veins, cross veins and apical margin, inner half of clavus along the whole of its length, except for three or four spots on anterior claval vein, pale yellow, veins, apart from preceding, concolorous. Wings infuscate, veins darker.

Anal segment of male moderately short, apical margin excavate, latero-apical angles produced, bluntly rounded. Pygofer with lateral processes of each side broadly subtriangular, medioventral process long, distally laterally compressed. Phallobase with a pair of sinuate lobes dorsolaterally, that on left broader distally, unornamented, that on right narrower and more heavily sclerotised; a pair of lobes ventrolaterally, that on left subtriangular distally with ventral angle directed cephalad and with small spines at apex, that on right elongate, narrow, minutely denticulate on

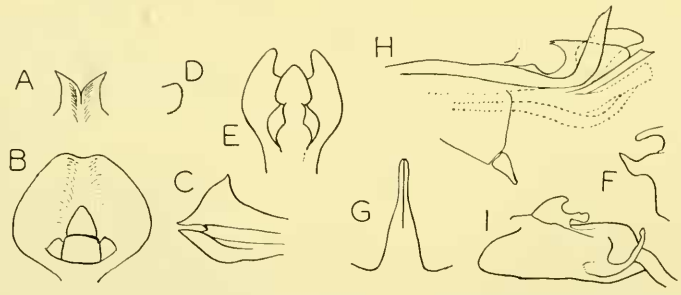


Fig. 14. *Magadha denticulata*, new species: A, medioventral process of pygofer; B, anal segment of male, dorsal view; C, apical portion of aedeagus, ventral view; D, denticulate process of left side of aedeagus near base. *Plectoderoides flavovittatus*, new species: E, anal segment of male, dorsal view; F, lateral process of pygofer; G, medioventral process of pygofer; H, aedeagus (ventral side uppermost); I, left genital style, inner aspect.

upper margin. Aedeageal processes long, ribbon-like, obliquely truncate and minutely serrate at apex.

Genital styles elongate-triangular, a long curved knobbed process on inner face near base, a broad curved three-cusped lobe at middle of dorsal margin.

Anal segment of female short. Pregenital sternite posteriorly transverse. Ovipositor with first valvulae four-spined, ventral lobe triangular, acute at apex; third valvulae broadly ovate, incurved distally. Bursa copulatrix armed at entrance with a triangular closely-grooved sclerite, supported on a slender wide crescentic base.

One male (the type) and one female, **Mokansan, Che Kiang Province, China,** Mrs. D. E. Wright, Sept. 1947. This species is distinguished by the shape of the genitalia and by coloration.

Plectoderoides uniformis Fennah, new species.
(Figure 15, F, G.)

Male: length, 2.9 mm.; tegmen, 4.2 mm. Female: length, 3.3 mm.; tegmen, 5.1 mm.

Post-tibiae laterally unispinose, seven-spined at apex.

Stramineous, head and mesonotum tinged with reddish-brown, abdomen dorsally fuscous. Tegmina sordid yellow, translucent, subapical and apical

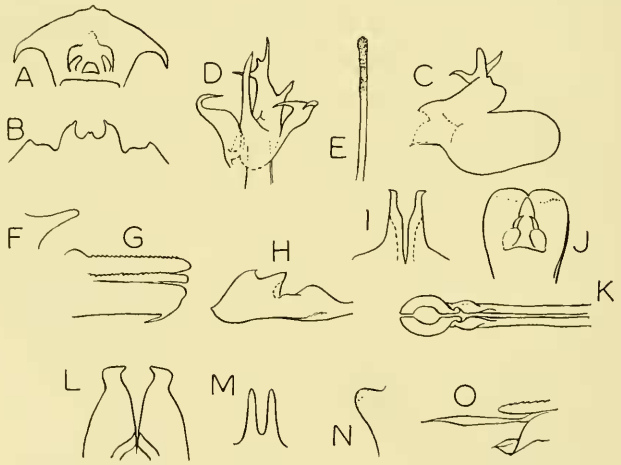


Fig. 15. *Magadha cervina*, new species: A, anal segment of male (lateral lobes spread out); B, medioventral portion of hind margin of pygofer; C, left genital style; D, aedeagus (phallobase); E, aedeagal (phallic) appendage. *Plectoderoides uniformis*, new species: F, lateral process of hind margin of pygofer; G, aedeagus, left side. *Caristianus ulysses* Fenn.: H, right genital style; I, medioventral process of pygofer; J, anal segment of male, dorsal view; K, aedeagus, dorsal view. *Akotropis fumata impersonata*, new subspecies: L, apical portion of anal segment, dorsal view; M, medioventral process of pygofer; N, dorsolateral lobe of hind margin of pygofer; O, apical portion of aedeagal processes, right side.

cells more or less completely infuscate, veins concolorous except marginal veinlets near stigma and transverse veins which are pallid. Wings lightly infuscate with darker veins.

Pygofer with laterodorsal angles narrow and finger-like. Phallobase with a pair of elongate lobes dorsolaterally, each serrate on upper and lower margins; mesad of, and slightly below these a pair of elongate unornamented lobes rounded-truncate at apex; a pair of broad smooth ventral lobes with ventral margins apposed, united distally and reflected ventrocephalad apically in a median spine; aedeageal lobes elongate, symmetrical, acuminate, apparently slightly more compressed laterally before apex. Genital styles of similar profile to those of *Caristianus,* a small blunt eminence on inner face near base.

One male, **Mokansan, Che Kiang Province, China,** Sept. 28, 1947, Mrs. D. E. Wright. One female, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, July 25, 1948, Gressitt is referred to this species. This species is distinguished by coloration.

Genus **Caristianus** Distant

Distant, 1916:63. Orthotype, *Caristianus indicus* Distant, 1916:63

Caristianus ulysses Fenn.

(Figure 15, H–K.)

Fennah, 1949:600.

Male: length, 3.0 mm.; tegmen, 3.4 mm.

Post-tibiae laterally unispinose, eight-spined at apex, basal metatarsal segment seven-spined, second metatarsus with six spines.

Dark reddish-brown, carinae of vertex, except for two stripes laterally, lateral margins of frons, except for four stripes, a transverse band across apex of frons and base of clypeus, clypeus at apex, rostrum, discal carinae and ventral margin of lateral lobes, median carina of mesonotum, and lateral carinae suffusedly, legs and metapleurites stramineous. Tegmina dark reddish brown, an irregular spot in basal half of costal cell, distal half of costal cell, two areas in anterior half of subcostal cell, stigma, veinlets of R at margin, a spot at union of clavai veins, and six other small spots on clavai margin, cross-veins in Cu faintly, pallid ivory.

Anal segment of male about as long as broad, distal margin convex, notched at middle. Pygofer with each lateral margin produced near middle in a slender curved digitate process, medioventral process deeply bifid, each limb twisted and compressed near apex. Aedeagus narrowly tubular, shortly cleft medially at apex with a short horizontal lobe dorsally at apex on each side, forming a slight hood.

Genital styles subquadrate, sinuate on ventral and dorsal margins, with a simple triangular eminence near middle of dorsal margin.

One male, 6,500–7,500 ft., West Hills, Yunnan fu, Yunnan, S. China,

Aug. 21–22, 1934, Ernest R. Tinkham. This is apparently the geographical representative of the Bornean species, known only from a single female: it differs from typical *C. ulysses* in the mesonotal disc being wholly dark, the pronotal disc narrowly infuscate between the carinae, and the lateral carinae of the frons transversely striped.

Genus **Akotropis** Matsumura

Matsumura, 1914:270. Logotype, *Akotropis fumata* Matsumura, 1914:270

Akotropis fumata impersonata Fennah, new subspecies.
(Figure 15, L–O.)

Male: length, 2.9 mm.; tegmen, 3.3 mm. Female: length, 2.8 mm.; tegmen, 3.5 mm.

Coloration as in typical subspecies, except for absence of any dark marking between eyes and lateral carinae of frons. Genitalia as figured. Post-tibiae laterally unispinose, distally 8-spined. Basal metatarsal segment seven-spined, second metatarsal six-spined.

One male (the subspecific type) and 5 females, **Mokansan, Che Kiang Province, China,** Aug. 4–Sept. 28, 1927, Mrs. D. E. Wright; one male and two females, 1,000 m. Suisapa, Lichuan District, W. Hupeh, China, Aug. 19, 1948, Gressitt. In the specimens from Suisapa the ground color of the tegmina is distinctly darker than in the Mokansan series.

Akotropis flaveola Mats.
Matsumura, 1914:271.

One female, Rivière de Quangtri, Anam, April 30, 1927, Mrs. D. E. Wright, is tentatively referred to this species. There is a slight curved fuscous stripe in the region of the ocelli.

Genus **Zathauma** Fennah

Fennah, 1949:605. Orthotype, *Zathauma cristatum* Fennah, *loc. cit.*

Zathauma metasequoiae Fennah, new species.

Female: length, 5.8 mm.; tegmen, 8.0 mm.

Vertex broader across base than long in middle line (3:1), posteromedial portion of disc declivous, remainder hollowed out; frons in middle line longer than greatest width (1.8:1), and longer than clypeus in middle line (1.3:1), greatest width of frons 1.7 times width at base; rostrum with apical segment 1.6 times as long as subapical, attaining post-trochanters. Pronotum with disc twice as broad across base as long in middle line, longer in middle line than vertex in same line (1.7:1) depressions laterad of disc very feeble; two carinae on each side between eye and tegula; mesonotum tricarinate, carinae prominent except on scutellar area, which is medially ecarinate, lateral carinae diverging from apex to base, anterior

portion of mesonotum of different texture from posterior; tegulae large, not carinate; protibiae slightly exceeding profemora, post-tibiae with a spine at basal third, six small spines and one large spine at apex, basal metatarsal segment with 6 teeth, the outermost largest, second metatarsal segment with two large outer teeth and a row of four short teeth between them; post-coxae produced lateroposteriorly in a short spine.

Basal half of clypeus, sides of head below antennae, all femora at apex, all tibiae at base and apex creamy yellow, frons except for a few pale fuscous spots at margins distally, vertex, pronotum, except lateral lobes, anterior part of mesonotal disc, mesonotum laterally, and tegulae, testaceous-stramineous; distal part of clypeus, rostrum, lower side of thorax, posterior part of mesonotal disc, legs, and abdomen dark fuscous. Tegmina creamy-white at extreme base, elsewhere fuscous-piceous sparingly marbled with grey, veins concolorous with small pallid spots, and pallid apex at margin, transverse veins mostly pallid, pallor most pronounced in first branch of Sc at node; wings smoky.

Pregenital sternite large, fully as long as fifth and sixth ventrites combined, hind margin shallowly convex. Subvaginal plate about as long as broad, its sides concave, mesal margins of ventrolateral parts of eighth segment with a submarginal channel basally; posterior angle subrectangulate.

One female, from *Metasequoia glyptostroboides*, **1,000 m., Suisapa, Lichuan District, W. Hupeh**, Aug. 21, 1948, Gressitt. This species is larger than the type, has a differently-shaped vertex and lacks the foliately raised mesonotal carina. The cephalic differences, however, are no greater than those in *Faventilla*, and in other characters, including tegminal venation and coloring, it generally resembles *Z. cristatum*.

Genus **Betatropis** Matsumura

Matsumura, 1914:274. Orthotype, *Betatropis formosana* Matsumura

Betatropis formosana Matsumura.
Matsumura, 1914:274.

Eight males and 10 females, Mokansan, Che-Kiang Province, China, Aug. 26–Sept. 24, 1927, Mrs. D. E. Wright.

Genus **Tangina** Melichar

Melichar, 1903:223. Haplotype, *Tangina bipunctata* Melichar, 1903:44

KEY TO SPECIES OF TANGINA

(1) (2) Vertex with two black or infuscate spots at apex ..... (3)
(2) (1) Vertex without such spots ..... (5)
(3) (4) Tegmina translucent, pallid yellow. Luzon ..... *T. quadripunctata* Mel.†

(4) (3) Tegmina pale yellow with two oblique dark stripes at apex of costal cell, and a black spot in first apical cell of Sc, which is bounded by black veins. Ceylon ..... *T. bipunctata* Mel.

(5) (6) Tegmina pale, a longitudinal stripe on Sc + R and another along sutural margin black, membrane infumed; a black spot on propleura. Luzon..... ..... *T. quadrilineata* Mel.

(6) (5) Tegmina tinged fuscous, a broad band along anterior margin white, a dark spot in first and second infumed apical cells; a black spot on mesopleura. China..... *T. sinensis*, new species

† *T. modesta* Haupt is probably not a member of this genus. It is distinguished from *T. quadripunctata* by the absence of two piceous spots on the pronotum and its generally darker hue.

Tangina sinensis Fennah, new species.

Male: length, 2.5 mm.; tegmen, 3.0 mm. Female: length, 2.8 mm.; tegmen, 3.4 mm.

Post-tibiae 8-toothed at apex; basal metatarsal segment 6-toothed distally, second metatarsal segment 5-toothed.

Creamy-white; a large round spot on mesopleura piceous; mesonotum tinged yellow, distal half of abdomen dorsally and ventrally orange-yellow. Tegmina translucent, pale fuscous, a band of even width along costal margin to beyond stigma, extending inward to middle of cell Sc + R, white; a minute spot in first infuscate apical areole beyond stigma and a larger round spot in adjoining apical areole, piceous. Wings hyaline, powdered white.

Pygofer with medioventral process deeply cleft medially. Genital styles triangular in profile, a triangular spinose process at middle of dorsal margin, directed laterad, and a similar process at apex directed dorsocephalad. Phallobase relatively long, with a pair of narrow tapering lobes dorsally, decurved at apex, minutely denticulate on ventrolateral margin, medioventrally a long straight spine directed cephalad.

Pregenital sternite of female posteriorly shallowly convex.

One male and 1 female, **Mokansan, Che-Kiang Province, China,** Sept. 2, 19, 1927, Mrs. D. E. Wright. This species differs from *T. bipunctata* in the absence of piceous marks on the head, of fuscous lateral mesonotal fields, and in the general infuscation of the tegmina coupled with the absence of oblique dark lines near the stigma.

Family **DICTYOPHARIDAE** Spinola

KEY TO GENERA OF CHINESE DICTYOPHARIDAE

(1) (2) Femora and tibiae, or merely lower angle of femora more or less widened into a flange.....(3)

(2) (1) Femora and tibiae not at all widened.....(7)

(3) (4) Vertex fully as long as pronotum and mesonotum combined; profemora with a small tooth subapically; post-tibiae with 5 spines.....(5)

(4) (3) Vertex not nearly as long as pronotum and mesonotum combined. Post-femora unarmed; post-tibiae 6–7 spined ..... *Orthopagus* Uhl.

(5) (6) Cephalic process with two slight constructions, its apex bombinate..... *Piela* Lall.

(6) (5) Cephalic process not constricted nor apically bulbous..... *Saigona* Mats.

(7) (8) Vertex with cephalic process more than three times as long as broad.... (9)

(8) (7) Vertex not more than three times as long as broad..... (13)

(9) (10) Head much narrower than pronotum; cephalic process slender, scarcely widened at apex, porrect. Post-tibiae with four spines..... *Thanatodictya* Kirk.

(10) (9) Head not greatly narrower than pronotum, cephalic process relatively stout ..... (11)

(11) (12) Cephalic process with lateral margins feebly defined, transversely and irregularly rugose on upper surface. Post-tibiae 1-spined.... *Leprota* Mel.

(12) (11) Cephalic process with lateral margins strongly carinate, median carina present only near base, upper surface slightly concave longitudinally. Post-tibiae 4–5 spined..... *Chanithus* Kol.

(13) (14) Vertex narrow throughout, 2.5–3 times as long as broad, its lateral margins sinuate..... (15)

(14) (13) Vertex not narrow throughout, relatively broad between eyes, not more than twice as long as broad..... (17)

(15) (16) Lateral carinae of frons widest apart between eyes..... *Togaphora* Mats.

(16) (15) Lateral carinae of frons widest apart near fronto-clypeal suture..... *Arephora* Bierm.

(17) (18) Carinae of pronotal disc strongly developed..... *Tropidophara* Bierm.

(18) (17) Carinae of pronotal disc almost obsolete..... *Sinodictya* Mats.

No Chinese species are known to the writer which fall into the restricted concept of *Dictyophara* Germar (Fennah, 1944: 81, 82, 90).

Genus **Orthopagus** Uhler

Uhler, 1896:278. Haplotype, *Orthopagus lunulifer* Uhler

Orthopagus helios Melichar.

Melichar, 1912:60.

Two males, Mokansan, Che Kiang Province, China, (Mrs. D. E. Wright, Sept. 8, 1927) agree with the description of *O. helios* Mel.; 1 female, Taihanroku, agrees exactly with the description of *O. elegans* Mel.; 1 male and 1 female, Taihanroku, Japan (H. Salter, July 22, 1908), agree exactly with the description of *O. helios* var. *diffusus* Mel., which was described from Taihanroku material. The proportions of the vertex (length : breadth) in the above material is 1.7 : 1. Even with the present short series there seems little room for doubt that all the above material is conspecific.

One male, Nai-suen, 21 m. S. E. of Naam-fung, Lin Kao District, Hainan Island, S. China (Aug. 31, 1932) differs from the preceding in having the

vertex not more than 1.6 times as long as broad and the lateral margins of the frons relatively straight. This may prove to be specifically distinct from the preceding, but the constriction at the middle of the vertex and the proportion of the produced relative to the basal portion debar it from being placed in the *splendens–fletcheri* section of Melichar's key.

Genus **Chanithus** Kolenati

Kolenati, 1857:427. Haplotype, *Flata pannonica* Germar, 1830:47

Chanithus gramineus (F.).
Fulgora graminea Fabricius, 1803:4.
Dictyophora sinica Walker, 1851:321.

Eight males, 7 females, Mokansan, Che-Kiang Province, 24, Sept. 6, 1927, Mrs. D. E. Wright; 3 males, 2 females, Lau-Chi, Che Kiang Province, July 9, 12, Mrs. D. E. Wright; 2 males, 1 female, Tunglu, Che Kiang Province, Sept. 8, 10, 1926, Mrs. D. E. Wright; 2 males and 2 females, 800–1,000 ft., Chang Tau Ching, Szechwan, July 18, 1948, Gressitt; 3 females, 1,000 m., Suisapa, Lichuan District, W. Hupeh, Aug. 19, 20, 25, 1948, Gressitt.

The intensity of pigmentation is slightly variable, but no geographical subspecies can be recognized in the above series.

Genus **Tropidophara** Bierman

Bierman, 1910:15. Haplotype, *Tropidophara dubiata* Bierman, 1910:16

Tropidophara javana (Lethierry).
Dictyophara javana Lethierry, 1888:467.

One male, between Limchow and Kung-kon, Hoh-p'u District, Kwangtung, S. China, Aug. 5, 1932, W. E. Hoffman.

Genus **Thanatodictya** Kirkaldy

Kirkaldy, 1906:392. Haplotype, *Dictyophara praeferrata* Distant, 1892:279

Thanatodictya lineata (Donovan).
Fulgora lineata Donovan, 1800:1, pl. 8, fig. 1.

One female, Tin T'au Village, Lam Lo District, Hunan Province, S. China, July 29, 1934.

Genus **Avephora** Bierman

Bierman, 1910:12. Haplotype, *Avephora pasteuriana* Bierm., 1910:12

Avephora eugeniae (Stål).
Pseudophana eugeniae Stål, 1859:271.
Avephora pasteuriana Bierman, 1910:12.

One male, Tai Kwong village, Lam Ho District, Hunan Province, S. China, July 26–28, 1934; 1 male, Hokeow (near Leokay, Tonkin), Yunnan,

S. China, Aug. 16, 1934, Chauncey Brownall; 1 female, White Cloud Mountain, Canton, China, July 6, 1932.

Family **FULGORIDAE** Latreille

KEY TO GENERA OF CHINESE FULGORIDAE

(1) (2) Cephalic process porrect, stout and distally rounded, much longer than pronotum and mesonotum together ..... *Pyrops* Spin.

(2) (1) Cephalic process much shorter than pronotum, or with a slender appendage ..... (3)

(3) (4) Cephalic process, at least at base, strongly recurved dorsad and overlying apical margin of vertex ..... (5)

(4) (3) Cephalic process very short, directed dorsad, with a small shallow depression at apex to which a slender rod-like appendage is weakly attached; anterior femora ampliate near apex ..... *Kalidasa* Kirk.

(5) (6) Carinae of frontal disc weak, near base separated almost by twice width of eye, converging strongly distad ..... *Penthicodes* Blanch.

(6) (5) Carinae of frontal disc subparallel, obsolete in distal third ..... *Lycorma* Stål

Genus **Lycorma** Stål

Stål, 1863:232. Logotype, *Aphana imperialis* White, 1846:330

Lycorma delicatula (White).

Aphaena delicatula White, 1845:37.

Post-tibiae laterally 5-spined, apically 7-spined.

Three males and 2 females, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, Aug. 21, 1948, Gressitt.

Family **TROPIDUCHIDAE** Stål

KEY TO GENERA OF CHINESE AND FORMOSAN TROPIDUCHIDAE

(1) (2) Tegmina leathery, brown, with numerous and irregular cross veins; if subhyaline distally, distal area not demarcated basally by a distinct line of transverse veinlets ..... (3)

(2) (1) Tegmina hyaline; if of a denser consistency then cross-veins relatively few and regular, or membrane abruptly and very closely reticulate ..... (5)

(3) (4) Tegmina with Cu_1 forked just distad of union of claval veins; wings reduced ..... *Padanda* Dist.

(4) (3) Tegmina with Cu_1 not forked as described. Wings normal ..... *Olontheus* Jac.

(5) (6) Tegmina with not more than nine cells at apical margin ..... (7)

(6) (5) Tegmina with more than nine apical cells ..... (15)

(7) (8) Frons setose. Longest apical cell in tegmina longer than clavus ..... *Trichoduchus* Bierm.

(8) (7) Frons not setose. Longest apical cell relatively shorter ..... (9)

(9) (10) Frons unicarinate. Tegmina with a single row of transverse veinlets ..... *Ommatissus* Fieb.

(10) (9) Frons tricarinate. Tegmina with two rows of transverse veinlets, or transverse veinlets few.....(11)

(11) (12) Tegmina with nodal line straight, distinct, with one row of transverse veins distad of it.....*Zema*, new genus

(12) (11) Tegmina with nodal line not demarcated, transverse veins rather irregular, straight or oblique.....(13)

(13) (14) Sc + R and Cu_1 simple in basal half of tegmina.....*Cixiopsis* Mats.

(14) (13) Sc + R and Cu_1 forked in basal half of tegmina.....*Duriopsis* Mel.

(15) (16) Tegmina with pre-costal area traversed by distinct veinlets.....(17)

(16) (15) Tegmina with costal vein at margin, or if submarginal, then without distinct transverse veinlets.....(23)

(17) (18) Tegmina with venation of distal third irregular, densely reticulate.....*Mesepora* Mats.

(18) (17) Tegmina with venation of membrane not as above.....(19)

(19) (20) Tegmina with Cu_1 forked basad of level of union of claval veins; nodal line situated two-thirds of length of tegmen from base.....(21)

(20) (19) Tegmina with Cu_1 forked distad of union of claval veins; nodal line only slightly distad of middle of tegmen.....*Eodryas* Kirk.

(21) (22) Second antennal segment cylindrical, more than twice as long as first.....*Catullia* Stål

(22) (21) Second antennal segment short, not as above.....*Epora* Wlk.

(23) (24) Tegmina basad of nodal line of cross-veins distinctly thicker than in apical portion.....(25)

(24) (23) Tegmina of uniform consistency throughout.....(29)

(25) (26) Vertex longer than pronotum and mesonotum together, sides of head distinctly constricted just before eyes.....*Ossoides* Bierm.

(26) (25) Vertex not so produced.....(27)

(27) (28) Frons weakly ampliate distally, lateral margins and median carina normal; lateral carinae of pronotal disc almost parallel with sides of vertex.....*Tambinia* Stål

(28) (27) Frons strongly ampliate to below level of antennae, lateral margins and median carina at base thickened, lateral carinae of pronotal disc curving outward toward tegulae.....*Kallitaxila* Kirk.

(29) (30) Vertex approximately twice as long as broad in middle.....(31)

(30) (29) Vertex relatively shorter, not or scarcely longer than broad.....(33)

(31) (32) Tegmina with Sc + R forked once shortly before nodal transverse line, M and Cu_1 simple.....*Tauropola* Jac.

(32) (31) Tegmina with Sc + R three-branched at nodal line, Cu_1 forked near level of union of claval veins.....*Swezeyaria* Metc.

(33) (34) Vertex anteriorly transverse; pronotal disc large; tegmina long with nodal line slightly basad of middle; Cu_1 forked before nodal line.....*Sogana* Mats.

(34) (33) Vertex anteriorly convex or acute; pronotal disc small; tegmina with nodal line not basad of middle; Cu_1 simple basad of nodal line.....*Neommatissus* Muir

In the above synopsis, Chinese species which have been referred to *Kallitambinia* Muir will run to *Tambinia* Stål, where they may well be placed until the limits of the former genus have been more precisely defined: Muir's concept, as interpreted from the type species, is restricted to forms with trispinose post-tibiae and claval veins which unite distad of the middle of the clavus. In *Tambinia* the post-tibiae are normally bispinose and the claval veins unite basad of the middle of the clavus.

Nacmusius Jac. (1944: 19) runs to *Padanda* Dist., and the writer can trace no generic character in which they differ. (It may be noted parenthetically that the holotype of the African *Padanda denti* Muir is an issid.) Notwithstanding its hiraciine appearance, the writer suspects that *Padanda* is related to a group of genera near *Ommatissus* Fieb. and including *Cixiopsis* Mats., *Duriopsis* Mel. (assigned by its author to Issidae), and a new genus described below. Perhaps *Olontheus* is likewise related to this group.

Parahiracia Ôuchi (1940: 299), which was described as a hiraciine tropiduchid, is here considered to belong to the Issidae.

Genus **Catullia** Stål

Stål, 1870:748. Haplotype, *Catullia subtestacea* Stål.

Catullia subtestacea Stål.

Stål, 1870:749.

One male, Cheung-nga San, Tin-tong, Loh-chang District, Kwangtung, Sept. 9, 1947; 1 female, Tai-ka, Tin-tong, Loh-Chang District, Aug. 20, 1947; 1 female, Naam-kong-paai, Yao shan, Yang-shan District, Kwangtung, Oct. 29–30, 1934; 1 male, Tai Kwong village, Lam Mo District, Hunan Province, S. China, July 26–28, 1934; 1 male, Kwei-Hsien, Kwei-Hsien District, Kwangsi, S. China, July 28–29, 1934, E. R. Tinkham; 2 males and 2 females, Mokansan, Che-Kiang Province, Sept. 2, 6, 22, 1927, Mrs. D. E. Wright.

Genus **Kallitaxila** Kirkaldy

Kirkaldy, 1901:6. Orthotype, *Kallitaxila granulata* Stål

Kallitaxila granulata Stål.

[*Taxila*] *granulata* Stål, 1870:750.

One female, Honam Island, P'an-yu District, Canton, June, 1935, W. E. Hoffman.

Genus **Sogana** Matsumura

Matsumura, 1914:268. Haplotype, *Sogana hopponis* Mats.

Sogana hopponis Matsumura

Matsumura, 1914:268.

One female, 800 m., Hori (Pull. Polisia), Taichung District, Formosa, Aug. 23, 1947, L. Gressitt.

Genus **Ossoides** Bierman

Bierman, 1910:26. Haplotype, *Ossoides lineatus* Bierman

Ossoides lineatus Bierman.
Bierman, 1910:27.

One female, White Cloud Mountain, P'an-yu District, Canton, Dec. 16, 1934.

Genus **Neommatissus** Muir

Muir, 1913:267. Orthotype, *Neommatissus spurcus* Muir

Neommatissus congruus (Walker)
Brixia congrua Walker, 1870:110.
Neommatissus spurcus Muir, 1913:268.

One female, Sao-tio, Tin-tong, Loh-chang District, Kwangtung, Aug. 23, 1947.

Genus **Eodryas** Kirkaldy

Kirkaldy, 1907:93. Haplotype, *Epora subtilis* Mel. not Walk. 1903:
= *E. melichari* (Dist.)

Eodryas melichari Distant.
Gen. ? *melichari* Distant, 1906:285.

One female, Honam Island, Canton, July 12–14, 1932; 1 female, Taipingfu, Sung-shen District, Kwangsi, Aug. 5–6, 1934, E. R. Tinkham.

Genus **Ommatissus** Fieber

Fieber, 1875:353. Haplotype, *Ommatissus binotatus* Fieb., 1876:174.

Ommatissus lofouensis Muir.
Muir, 1913:267.

Post-tibiae laterally bispinose, apically 8-toothed. Basal metatarsal segment 7-toothed.

Aedeagus longer than post-femora, comprising a pair of long, slender ribbon-like processes directed caudad, acuminate at apex, and an even longer median cylindrical process gradually decurved distad but curved upward at distal fifth to point dorsad, apex not acuminate. Genital styles elongate-triangular, bluntly rounded distally, a small spine, curved laterad dorsally near base.

One male, Mokansan, Che Kiang Province, Aug., 1927, Mrs. D. E. Wright. There is no doubt that this species is congeneric with *O. binotatus* Fieb.

Zema Fennah, new genus

Vertex about twice as broad as long, anterior margin obtusely angulately convex, posterior margin correspondingly rounded-concave, lateral mar-

gins slightly converging distad, median carina present only in basal two-thirds, an impression at each side on disc; frons in middle line longer than greatest width (1.3:1), basal margin transverse, lateral margins diverging to below level of antennae, thence shallowly incurved; a transverse callus across frons at base, with median and two lateral discal carinae arising from it, the latter enclosing an oval which is widest about level of lower margin of eyes; clypeus about two-thirds as long as frons, not distinctly carinate but with median area raised. Pronotum in middle line rather longer than vertex in same line, anterior margin rounded convex, posterior margin subangulately concave with a distinct notch at middle; disc tricarinate, an impression on each side of middle line, lateral carinae diverging caudad, anteriorly evenly curving mesad into anterior margin, a single carina on each side between eye and tegula; mesonotum broader than long, median carina reaching to scutellum, which is not divided from disc by a groove, lateral carinae evenly curved mesad anteriorly. Post-tibiae with four spines laterally, and eight small spines at apex; basal metatarsal segment with about nine teeth at apex, second metatarsal segment short, with a spine at each apical angle and a convex pad between them.

Tegmina about three times as long as broad, widest at level of nodal line, costal margin and sutural margin subparallel, the former only weakly incurved at base. Sc + R, M, and Cu united to level of nodal line, distad of nodal line a single distinct row of transverse veins; clavel suture present, flexible, claval veins united at middle of clavus. Wings ample, Sc + R, M, and Cu_1 each forked once.

Ovipositor with first valvulae denticulate on ventral margin with two blunt teeth at apex, a single relatively large tooth at apex, and two blunt teeth on dorsal margin; third valvulae with two or three teeth on dorsal margin and about five teeth on apical margin.

Type species, *Zema gressitti*, new species.

The present concept is separated from *Cixiopsis* by the shape of the frons and the tegminal venation: in *Cixiopsis* the frons is narrowed in the middle, and the lateral discal carinae unite with the median carina in a point; the lateral carinae are foliate, as is visible from above, and the clypeus is medially carinate. In the tegmina the clavel veins unite two thirds from the base of the clavus, and there is a network of veinlets on the distal third. From *Ommatissus* it is separated, in addition to other characters, by the carination of the frons and by the shape and venation of the tegmina: in *Ommatissus* the disc of the frons is unicarinate, while the tegmina are more acutely curved at the apical margin; moreover Cu_1 forks on the corium near the union of the clavel veins. It differs from *Padanda* in the shape of the head and pronotum and in tegminal venation: in *Padanda* the frons is less narrowed basally and the lateral discal carinae begin their mesad

curvature rather nearer the base: in the tegmina of Distant's holotype Sc + R and M are simple on the corium, but Cu_1 is forked slightly distad of the union of the claval veins; moreover numerous irregular transverse veinlets are present and form a lax reticulum. The type of *P. atkinsoni* is relatively short-winged: the claval suture is evident, but is not a functional line of flexure: the wings are extremely reduced.

Zema gressitti Fennah, new species.
(Figure 16, A–F.)

Female: length, 5.0 mm.; tegmen, 4.9 mm.

Vertex anteriorly broadly rounded. Tegmina with claval suture present and functional; venation regular; wings fully developed.

Testaceous to dark tawny: intercarinal area of vertex, a spot overlying each impression on pronotal disc, dorsal portion of lateral lobes of pronotum, mesonotum except laterally, middle of clypeus, tip of rostrum, thoracic pleurites and abdominal sclerites fuscous-piceous; a broad band overlying fronto-clypeal suture, extending across sides of head, stramineous, ventral portion of lateral lobes of pronotum, ivory-white; most of frontal disc, stripes along all femora and tibiae, pro- and mesotarsi fuscous. Third valvulae of ovipositor piceous dorsally, translucent testaceous ventrally.

One female, **Lung-chi-pa, Szechuan-Hupeh border,** July 19, 1948, Gressitt.

Family **ISSIDAE** Spinola

KEY TO GENERA OF CHINESE ISSIDAE

(1) (2) Tegmina usually brachypterous. Basal metatarsal segment with two spines ..... (3)

(2) (1) Tegmina macropterous, covering abdomen completely. Basal metatarsal segment with more than two spines ..... (7)

(3) (4) Profemora and protibiae foliate in male, compressed and weakly foliate in female ..... *Caliscelis* Lap.

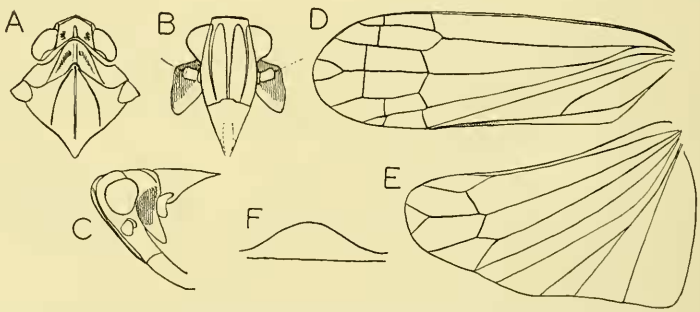


Fig. 16. *Zema gressitti*, new genus and species: A, head and thorax; B, frons and clypeus; C, head and thorax, side view; D, tegmen; E, wing; F, pregenital sternite of female.

(4) (3) Legs normal, or only protibiae widened distally at external angles.....(5)

(5) (6) Second segment of antennae transverse at apex with arista inserted apically and projecting in same line as axis of second segment..... *Ommatidiotus* Spin.

(6) (5) Second segment of antennae lateroapically produced in a distinct hump; arista projecting almost at right angle to axis of second segment..... *Conocaliscelis* Mats.

(7) (8) Body-form hemispherical. Tegmina strongly curved, claval suture absent .....(9)

(8) (7) Not as above .....(15)

(9) (10) Wings well developed.....(11)

(10) (9) Wings rudimentary .....*Hemisphaerius* Schaum

(11) (12) Frons narrow, median carina present.....*Darumara* Merc.

(12) (11) Frons broad, median carina absent.....(13)

(13) (14) Anterior margin of vertex not carinate; lateral margins of frons straight, divergent distally as far as subangulate inflexure below level of antennae .....*Gergithus* Stål

(14) (13) Anterior margin of vertex carinate; lateral margins of frons roundly diverging to below level of antennae thence smoothly incurved, outline convex, not subangulate .....*Mongoliana* Dist.

(15) (16) Frons in profile strongly produced, anterior margin of vertex basad of level of anterior margin of eyes.....(17)

(16) (15) Frons in profile straight or shallowly convex; anterior margin of vertex distad of anterior margin of eyes.....(21)

(17) (18) Basal area of frons tricarinate. Protibiae and mesotibiae not foliately expanded .....*Fortunia* Dist.

(18) (17) Basal area of frons with two carinae which unite basally. At least protibiae subfoliately expanded .....(19)

(19) (20) Mesotibiae foliately expanded.....*Parahiracia* Ôuchi

(20) (19) Mesotibiae not foliately expanded.....*Clipeopsilus* Jac.

(21) (22) Vertex twice as broad as long in middle, or nearly so, frons at least as broad as long. Wings trilobed.....(23)

(22) (21) Vertex not twice as broad as long, or if so then frons longer than broad. Wings with margin indented only once.....(31)

(23) (24) Vertex more than three times as broad as long in middle; frons with lateral carinae parallel to below level of antennae. Wings absent..... *Hysteropterum* A. & S.

(24) (23) Vertex not three times as broad as long.....(25)

(25) (26) Frons with a carina completely across base parallel to anterior margin of vertex; median carina distinct as far as fronto-clypeal suture, sublateral carinae developed only at laterobasal angles.....*Gelastyra* Kirk.

(26) (25) Frons without a complete transverse carina across base in addition to carina between frons and vertex.....(27)

(27) (28) Tegmina broadest at level of claval apex. Wings with margin only shallowly indented, both postcubital and anal lobes narrow and small in relation to anterior lobe.....*Kodaianella*, new genus

(28) (27) Tegmina broadest in basal half; wings with postcubital and anal lobes ample ..... (29)

(29) (30) Wings with posterior vein of anterior lobe and anterior vein of postcubital lobe fused into a single thick stem lying in groove near apical margin ..... *Sarima* Mel.

(30) (29) Wings with these veins separate, linked only at apical margin by a very short oblique sclerotized strut ..... *Tetrica* Stål

(31) (32) Frons tricarinate; vertex with anterior margin strongly convex. Tegmina devoid of claval suture ..... *Neodurium*, new genus

(32) (31) Frons not carinate or only weakly medially so at base ..... (33)

(33) (34) Lateral margins of vertex and frons laminate. Tegmina with Sc + R united in a common stalk on basal quarter; wings with Sc + R forked at middle ..... *Tetricodes*, new genus

(34) (33) Lateral margins of vertex and frons acute but not foliate. Tegmina with Sc and R separate from base; wings with Sc + R not forked ..... *Duriopsilla*, new genus

The above synopsis has been compiled in part from literature, and obvious differences in published characters have been used for the separation of genera. The result does not represent a full evaluation of the genera here listed. *Parahiracia* Ôuchi and *Clipeopsilus* Jac. may well be congeneric and both may ultimately be suppressed under *Fortunia* Dist. The whole Hemisphaeriinae require critical study. The rather large number of monotypic genera of Issidae described in the Fauna of British India (Distant, 1906, 1916), which is increased in the present report, probably reflects a paucity of specimens rather than incorrect delimitation of generic concepts, but a study of further material from eastern Asia is much to be desired.

Genus **Mongoliana** Distant

Distant, 1909:87. Haplotype, *Hemisphaerius chilochorides* Wlk.

Mongoliana chilochorides (Wlk.).

Hemisphaerius chilochorides Walker, 1851:379.

Eight males and 9 females, Okinawa, April, 1912, J. C. Thompson; 1 female, Chizuka, Okinawa, July–Sept., 1945, Bohart and Harnage, 1945; 1 male and 2 females, Mimasaka, Japan, July, 1912, J. C. Thompson.

Mongoliana recurrens (Butl.).

(Figure 17, G, H; Figure 18, A–C; Figure 19, B.)

Hemisphaerius recurrens Butler, 1875:98, pl. 4, fig. 20.

Frons longer than broad (1.1:1), medially ecarinate. Tegmina almost smooth, with dull polish, wings distinctly shorter than tegmina. Post-tibiae 2-spined at sides, 7-spined at apex, basal metatarsal segment with two stout spines and seven small intervening spines.

Sepia brown; a transverse bar across clypeus at base, a similar bar

across frons at apex, round mottling on frons and sides of head, eleven round spots along a shallow sulcus near each lateral margin of frons, anterior and lateral carinae of vertex (in part), a series of small spots along anterior margin of pronotum and a small round spot on disc on each side of middle, lateral carinae of mesonotal disc and scutellum, ivory yellow. Clypeus, distal portions of lateral lobes of pronotum, pro- and mesocoxae, pro- and mesofemora, pro- and mesotibiae in basal two-thirds piceous; pro- and mesotrochanters, rostrum, hind legs and lower surface of abdomen testaceous. Tegmina uniformly very dark castaneous, a short transverse linear spot inward from sutural margin at level of apex of clavus.

Anal segment short, broad, expanding distally, widest at truncate apical margin, anal foramen in distal half, lateroapical angles rounded. Pygofer with lateral margins convex. Aedeagus shallowly U-shaped, phallobase terminated dorsally in a pair of short tapering bluntly-pointed lobes, ventrally in a pair of short, broad, rounded lobes, laterally deeply incised, more so on left than right. Aedeagus with a pair of long curved blade-like spines arising ventrolaterally distad of middle, directed cephalad and slightly dorsad near apex, apex of aedeagus broadly bilobate, each lobe obliquely truncate. Genital styles moderately narrow at base, expanding distally, apical margin more or less semicircularly curved, dorsal margin in middle produced dorsad in an oblique, transversely-compressed biscuspidate process.

Posterior margin of pregenital sternite broadly and shallowly subtriangularly produced at middle.

One female, Lung-Tau Shan, N. Kwangtung, June 11, 1947, Gressitt; one male and 1 female, 1,000 m., Suisapa, Lichuan District, W. Hupeh, June 23, 1948, Gressitt.

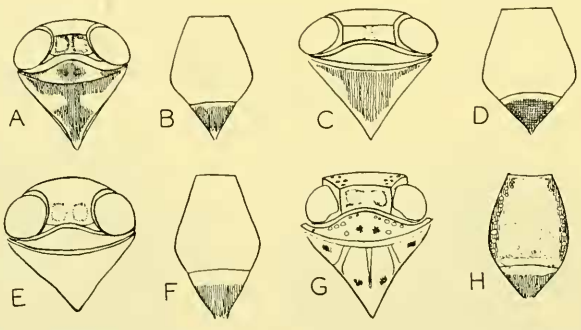


Fig. 17. *Hemisphaerius rufovarius* Wlk.: A, head and thorax; B, frons and clypeus. *Hemisphaerius imitatus* Mel.: C, head and thorax; D, frons and clypeus. *Gergithus iguchii* Mats.: E, head and thorax; F, frons and clypeus. *Mongoliana recurrens* Butl.: G, head and thorax; H, frons and clypeus.

Genus **Gergithus** Stål

Stål, 1870:756. Type, *Hemisphaerius schaumi* Stål, 1855:191

Gergithus rugulosus Melichar.
Melichar, 1906:64.

One male, Hong Kong, China, Koebele, Oct. 1895.

Gergithus iguchii Mats.
(Figure 17, E, F; Figure 19, A.)
Gergithus iguchii Matsumura, 1916:98.

FEMALE: length, 3.5 mm.; tegmen, 4.8 mm.

Frons slightly convex, smooth, ecarinate, polished. Post-tibiae 2-spined laterally, 6-spined at apex, basal hind tarsus with a spine at each angle, and 7 spines between. Tegmina with veins prominent, sub-parallel, with a few cross-veins or anastomoses.

Castaneous-fuscous; a band across base of clypeus, extending on genae up to antennae, and pro- and mesocoxae at base, pallid yellow; clypeus, femora at base and tibiae laterally (except on hind legs), piceous; mesonotum golden yellow. Tegmina golden yellow, costal margin broadly at base, narrowly distally, apical margin broadly, three large contiguous spots lying across basal third, two larger contiguous spots lying across apical third castaneous-fuscous. Wings pallid grey with darker veins.

Twelve females, Mokansan, Che Kiang Province, China. It is possible

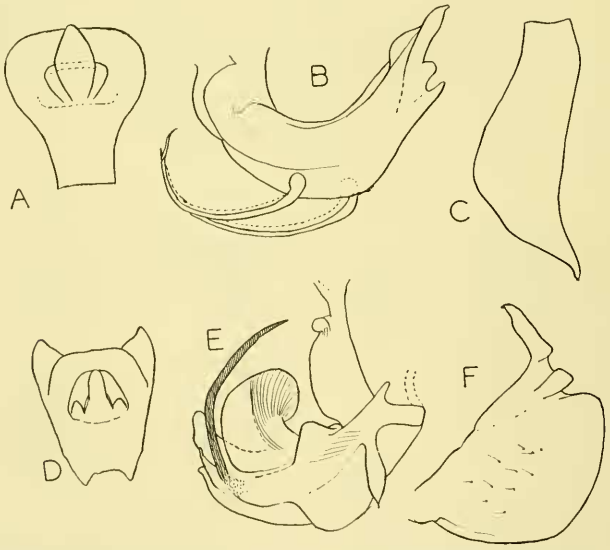


Fig. 18. *Mongoliana recurrens* Butl.: A, anal segment of male; B, aedeagus, left side; C, pygofer, left side. *Hemisphaerius signifer* Wlk.: D, anal segment of male; E, aedeagus, right side; F, left genital style.

that the Che Kiang population is subspecifically distinct, as the darker markings are relatively larger, but the point cannot be settled with material of one sex only. The anterior carina of the vertex is obsolete, and this species could perhaps be referred to *Hemisphaeroides* Mel., but the latter genus requires re-defining before further species can be assigned to it with confidence.

Genus **Hemisphaerius** Schaum

Schaum, 1850:71. Haplotype, *Issus coccinelloides* Burm., 1833:305

Hemisphaerius rufovarius Wlk.

(Figure 17, A, B.)
Walker, 1858:95.

The present material differs from Walker's type only in the presence of two obscure small piceous spots in the apical third of the tegmina.

One male, Dwa Bi, Hainan Island, July 25, 1935, Gressitt, and 1 mutilated specimen, Ta Han, Hainan Island, June 24, 1935, Gressitt.

Hemisphaerius imitatus Melichar.

(Figure 17, C, D).
Melichar, 1906:88.

Female: length, 4.4 mm.; tegmen, 4.2 mm.

Greenish translucent. Clypeus, except for a yellow transverse band at base, a spot on each lateral lobe of pronotum at ventral margin, pro- and mesocoxae, two transverse bands on pro- and mesotibiae, post-femora except at apex, and both surfaces of abdomen piceous, with hind margin of each segment bordered yellow.

One female, 2,000 ft., Kepakiang, Sumatra (H. C. Kellers), presented by W. M. Giffard.

Hemisphaerius signifer Walker.

(Figure 20, A–C; Figure 18, D–F.)
Walker, 1851:380.

One male, 1,000 m., Suisapa, Liehuan District, W. Hupeh, China, Aug. 19, 1948, Gressitt.

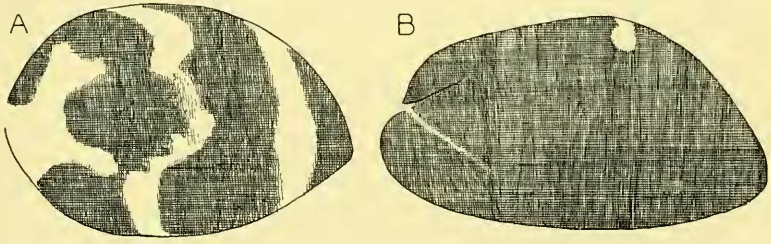


Fig. 19. *Gergithus iguchii* Mats.: A, tegmen. *Mongoliana recurrens* (Butl.): B, tegmen.

Kodaianella, Fennah, new genus

Frons broader than long in middle line (1.6: 1), lateral margins diverging straight to below level of antennae, thence abruptly incurved through 80° to suture, basal margin slightly angulately concave, disc slightly convex, almost flat, median carina distinct, vertex twice as broad as long in middle line, anterior margin obtusely angulate, posterior margin subparallel to anterior, lateral margins slightly diverging distally, disc slightly concave, median carina feeble. Rostrum scarcely surpassing mesotrochanters, apical segment scarcely shorter than subapical, apex very obliquely truncate. Pronotum in middle line about 1.2 times length of vertex in same line, a small impression on each side of middle, mesonotum in middle line slightly longer than pronotum, disc slightly tumid, anteriorly bounded by a fine transverse ridge parallel with hind margin of pronotum. Post-tibiae laterally 2-spined. Tegmina broadening distally, costal margin convex, apical margin convex-truncate, Sc + R forked near base, M forked slightly basad and Cu forked markedly distad of union of claval veins. Wings almost as long as tegmina, anal lobe reduced, apical margin slightly indented twice in Cu.

Anal segment of female relatively narrow, third valvulae broadly triangular, apical margin membranous, oblique.

Type species, *Kodaianella bicinctifrons*, new species.

Kodaianella bicinctifrons Fennah, new species.

(Figure 21, A–D; Figure 22, A–C.)

Male: length, 4.0 mm.; tegmen, 4.0 mm. Female: length, 3.9 mm.; tegmen, 4.2 mm.

Frons distinctly medially carinate, submarginal carinae feeble. Post-tibiae 11-spined at apex, basitarsus 12-spined distally.

Testaceous; basal half of frons and a more or less distinct band across middle of distal half, vertex, disc of pronotum, a band across lateral lobes of pronotum, and intercarinal areas of mesonotum, reddish-brown; sides of head below eyes and ventral portion of lateral lobes of pronotum, pallid yellow, hind legs and anteromedial portion of abdominal ventrites infuscate. Tegmina translucent testaceous lightly sprinkled reddish-brown as

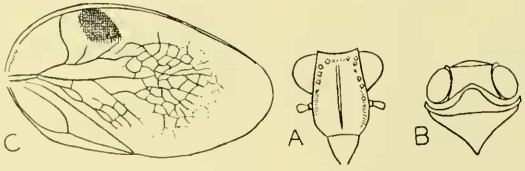


Fig. 20. *Hemisphaerius signifer* Wlk.: A, frons and clypeus; B, head and thorax; C, tegmen.

figured, with a narrow irregular fascia traversing middle. Wings fuscous, veins darker.

Anal segment long, relatively narrow, slightly expanding distally, apical margin semicircularly excavate, lateroapical angles more or less acutely produced, anal foramen in basal half. Pygofer with laterodorsal angles slightly prominent, rounded, lateral margin shallowly sinuate. Genital styles moderately short, about as wide near apex as at base, apical margin more or less abruptly transversely truncate, dorsal margin at middle produced dorsad in a large tapering lobe with anterior margin excavate in its dorsal third, apex acuminate, a short stout peg-like process laterally below apex. Aedeagus shallowly curved dorsad. Phallobase terminating dorsally in a median shagreen finger-like lobe directed cephalad with a triangular sclerotised spine at each angle; and ventrally in a pair of acutely rounded lobes. Phallus with a pair of long stout spines arising in distal half, directed ventrocephalad below aedeagus.

Posterior margin of pregenital sternite of female broadly produced caudad, margin of medial lobe truncate.

One male (the type), 800–1,000 ft., **Chang-Tau-Ching, Szechwan,** July 18, 1948, and 1 female, Sang-Hou-Ken, Hupeh-Szechwan Border, China, July 19, 1948, both taken by Gressitt.

This genus runs to *Samantiga* in Distant's key (1906: 351), but differs in the shape of the head, tegmina, and venation; it is superficially similar to *Kodaiana* Dist., but differs in the number of post-tibial spines and in the shape of the ovipositor; from *Sarima* it differs in the shape of the vertex, frons, and tegmina and in tegminal venation; and from *Narayana* in the structure of the head.

Duriopsilla Fennah, new genus

Frons longer in middle line than broad (1.2: 1), lateral margins sinuately diverging to below level of antennae, thence moderately incurved to

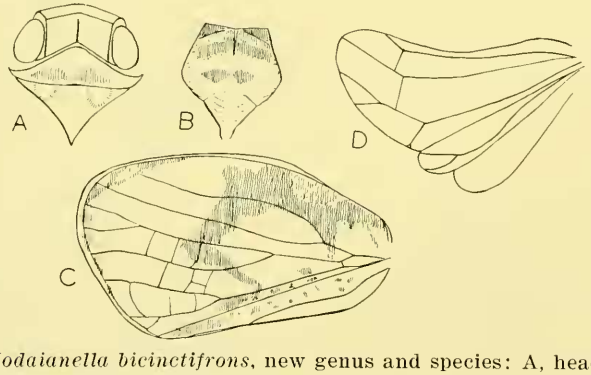


Fig. 21. *Kodaianella bicinctifrons*, new genus and species: A, head and thorax; B, frons and clypeus; C, tegmen; D, wing.

suture, disc markedly convex, carinae and lateral pustules feeble, merely indicated; vertex shallowly impressed, lateral and apical margins forming a semi-circle, posterior margin shallowly emarginate, slightly notched at middle, median carina distinct. Pronotum in middle line slightly longer than vertex, median carina feeble, an impression on each side of middle; mesonotum not quite as long as pronotum and vertex together. Rostrum reaching postcoxae, apical segment shorter than subapical, about three times as long as wide, apex transversely rounded-truncate. Pronotum with lateral lobes smooth; mesonotum twice as broad as long. Legs slender, femora not compressed; post-tibiae laterally 3-spined. Tegmina relatively narrow, costal and sutural margins straight, more or less parallel to level of node, symmetrically narrowing to acutely-rounded apex; Se and R separate from base, M simple, Cu_1 forked slightly basad of middle of claval suture, claval suture distinct. Wings deeply incised in Cu.

Anal segment of female relatively short and broad, tapering distad. Third valvulae subequilaterally triangular, apical margin submembranous, tumid. Posterior margin of pregenital sternite transverse.

Type species, *Duriopsilla retarius,* new species.

Duriopsilla retarius Fennah, new species.
(Figure 25, A–D.)

Vertex broader than long (1.2 : 1). Post-tibiae 8-spined at apex; basal metatarsal segment 9-spined at apex.

Ochraceous; frons yellow; clypeus yellowish-brown, rostrum, hind margin of pronotal disc, lateral edge of lateral pronotal lobes, mesonotal disc medially, legs except at joints, hind basitarsi, sometimes median area of abdominal ventrites, fuscous; pleurites immediately below base of costal margin of tegmina fuscous-piceous.

Tegmina fuscous, heavily and uniformly covered with minute pallid reticulum of veinlets; veins dull greenish yellow.

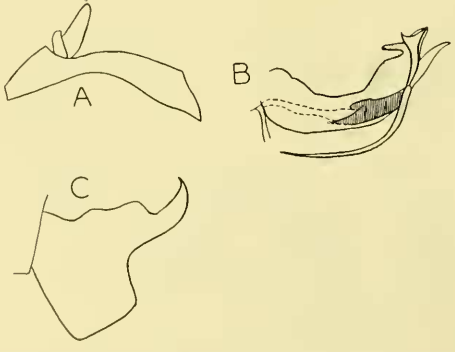


Fig. 22. *Kodaianella bicinctifrons*, new genus and species: A, anal segment of male, left side; B, aedeagus, left side; C, left genital style.

Anal segment of male triangular, broader than long, lateral angles deflexed.

Base of first valvulae of ovipositor as figured.

One male (the type) and 1 female, **1,000 m., Suisapa, Lichuan District, W. Hupeh, China,** July 25, 1948, Gressitt. This genus is similar to *Duriopsis,* but differs in the absence of a median carina on the clypeus, and of lateral mesonotal carinae; in the 3-spined post-tibiae, and the complete separation of Sc and R in the tegmina.

Genus **Gelastyra** Kirkaldy

Kirkaldy, 1904:280. Haplotype, *Issus testudinarius* Stål, 1854:246

Gelastyra biplaga (Wlk.), new combination.
(Figure 23, E, H.)
Issus biplaga Walker, 1851:367.

Female: length, 5.4 mm.; tegmen, 5.0 mm.

Vertex broader than long (1.8:1); post-tibiae 7-spined at apex, basal metatarsal segment 11-spined at apex.

Testaceous, tinged green; frons except for a round spot slightly basad of middle minutely and heavily speckled fuscous; anterior half and middle of pronotum, mesonotal disc laterally, a series of six oblique stripes on each side of middle line of clypeus, brown; transverse sulcus at base of frons piceous. Tegmina pallid, sub-translucent, basal quarter, except veins, and a broad band from middle of costa to sutural margin distad of apex of clavus, except veins, chocolate brown; veins green, pallid portion of tegmina tinged with green except in a broadly ovate area one-third from base.

Pregenital sternite produced posteriorly in a stout subspatulate process slightly broader than long. Third valvulae stout, broadly triangular, apical margin membranous. Anal segment narrowly ovate and laterally decurved distad of anal foramen.

One female, Hong Kong, Oct., 1895, Koebele. This species, which is not included in Melichar's monograph, runs to the *spectans* Wlk.–*latifrons* Mel. section of Melichar's key (1906:263) but differs from both in the shape of the vertex and of the carinae in the basal part of the frons.

Neodurium Fennah, new genus

Frons in middle line longer than broad (about 1.2:1), lateral margins almost straight, diverging to below level of antennae thence incurved to suture; disc shallowly convex, strongly depressed in middle near fronto-clypeal suture, leaving lateroapical areas prominent; median carina strongly developed on basal three-quarters, more feeble in apical quarter; a pair of weak but distinct sublateral carinae enclosing an elongate-oval area of disc, strongly incurved basally to meet transversely at middle line, vertex

subturbinate, apical margin subrectangulately convex, posterior margin obtusely angulately excavate, lateral margins straight, slightly converging apically; disc hollowed out, finely carinate throughout in middle line; sides of head shallowly grooved between lower margin of eye and frontoclypeal suture, clypeus ecarinate, convex, latero-basally slightly overhung by latero-apical area of frons; rostrum slightly surpassing mesotrochanters, apical segment shorter than subapical, very obliquely truncate at tip. Pronotum in middle line about as long as vertex, medially carinate with a small depression on each side of mid-line, lateral lobes with four short parallel ridges near posterior margin; at least twice as broad as long, mesonotum shorter than combined lengths of pronotum and vertex, finely medially carinate, even where medially depressed, lateral carinae short, strongly anteriorly convergent, separated from median carina posteriorly by a ridge or convexity of disc.

Pro- and mesofemora compressed, post-tibiae laterally with a spine near base and two large spines distally, apically with 8 spines, basal metatarsal

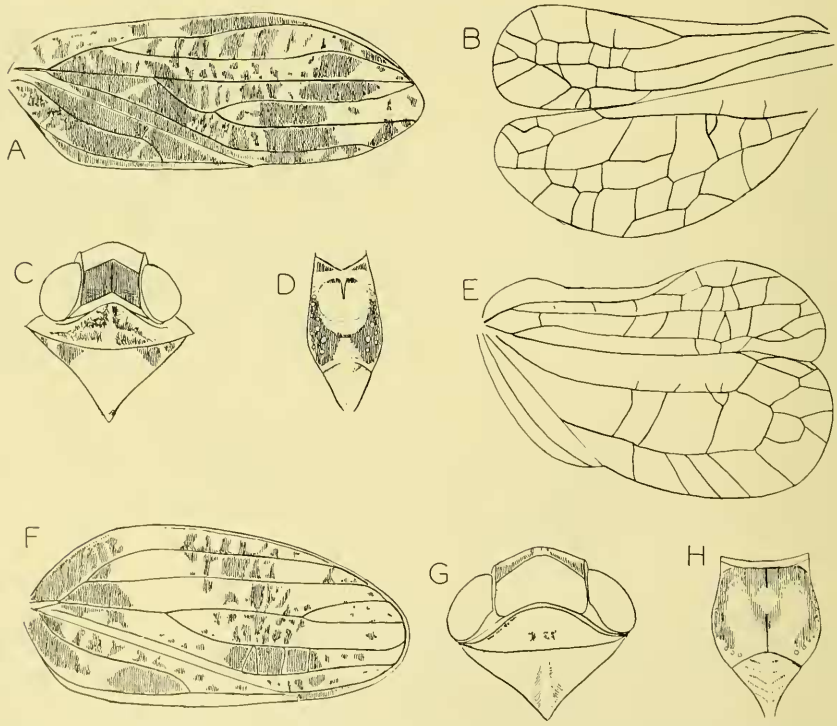


Fig. 23. *Tetricodes polyphemus*, new species: A, tegmen; B, wing; C, head and thorax, dorsal view; D, frons and clypeus. *Gelastyra biplaga* (Wlk.): E, wing; F, tegmen; G, head and thorax, dorsal view; H, frons and clypeus.

segment with about 13 spines. Tegmina with costal and sutural margins parallel to level of node, apical margin deeply and asymmetrically rounded, Sc and R arising separately from base, M simple, Cu forked basad of union of claval veins, claval suture absent, united claval vein continued to sutural angle then curving into feeble submarginal vein. Wings large, deeply incised on apical margin into two lobes, anal lobe not present, veins simple, distal venation coarsely reticulate.

Pregenital sternite of female with posterior margin shallowly excavate medially. Ovipositor with third valvulae stout, strongly convex, their apical margins tumid, polished, and bounding a lenticular cavity when apposed.

Type species, *Neodurium postfasciatum*, new species.

Neodurium postfasciatum Fennah, new species
(Figure 24, E–I.)

Female: length, 5.0 mm.; tegmen, 5.1 mm.

Vertex broader than long in middle line (1.8:1). Profemora foliately expanded in apical half, mesofemora compressed, protibiae with subfoliate margins, basal metatarsal segment with 13 spines.

Testaceous-brown, finely sprinkled fuscous; a pair of ocellate spots at base of vertex, clypeus, and a broad band near apex of profemora, fuscous piceous. Tegmina tawny-gold, with darker suffusion and piceous spots and marbling on all areas except a broad band from immediately distad of node to estimated position of apex of clavus, and between hind margin and united claval veins. Wings translucent-fuscous with darker veins. Abdominal ventrites suffused fuscous; third valvulae of ovipositor ochraceous dorsally, fuscous ventrally, with a broad piceous band adjoining polished dull yellow tumid margin.

Anal segment of female short, lateral margins strongly convex, apex subacutely rounded. Third valvulae of ovipositor, when apposed, in ventral view about twice as broad as long. Base of first valvulae and posterior margin of seventh sternite as figured.

Three females (one the type), **1,000 m., Suisapa, Lichuan District, W. Hupeh, China**, Aug. 19, 20, 1948, Gressitt. The genus *Neodurium* differs from *Duriopsis* Mel., which it resembles, in shape of frons, proportions of mesonotum, and tegminal venation, and from *Flavina* Stål in proportions of frons, shape of legs, and absence of a claval suture in the tegmina; it also differs from both in the number of post-tibial spines.

Tetricodes Fennah, new genus

Vertex broader than long (2:1), anterior margin obtusely angulately produced, lateral margins slightly convergent anteriorly, posterior margin subangulately emarginate, disc sloping down to middle line, median carina

absent; frons longer than broad (1.3:1), basal margin shallowly excavate, lateral margins shallowly convex, disc with median carina present only basally, otherwise tumid in basal half, position of sublateral carinae marked by shallow groove, frontoclypeal suture slightly impressed, rostrum attaining post-trochanters. Pronotum short, extremely narrow behind eyes, in middle line slightly longer than vertex; mesonotum slightly longer than pronotum. Post-tibiae armed with two stout spines in distal half, a minute tooth sometimes at extreme base, eight teeth at apex, basal metatarsal joint as long as other two combined. Tegmina with costal and sutural margins parallel, the former gradually rounding into oblique apical margin which is acutely bent at M_4, Sc + R fork one-quarter from base, each limb simple to apex, M three-branched, Cu_1 simple, union of claval veins level with fork of M. Wings larger than tegmina, with broadly reticulate venation, margin deeply cleft in Cu, anal lobe absent.

Anal segment of female moderately elongate, parallel sided and distally rounded. Ovipositor with third valvulae stout, triangular, with thick, tumid, pellucid apical margin.

Type species, *Tetricodes polyphemus*, new species.

Tetricodes polyphemus Fennah, new species.
(Figure 23, A–D.)

Female: length, 5.2 mm.; tegmen, 5.5 mm.

Tegmina with apex of R curved toward M, M_3 distilly uniting with M_{1+2}.

Ochraceous to pallid with scattered greenish suffusion; discs of vertex and pronotum, except in middle line, and disc of mesonotum orange-brown and sepia; a polished tumescence on frons and a suffusion over distal quarter, a narrow triangle before eyes, and a spot on mesopleura, piceous; most of clypeus, lateral lobes of pronotum near margin, except for a few greenish pustules, a pair of transverse bands on femora, a suffusion on pro- and mesotibiae distally, abdomen dorsally and ventrites 4 to 7, fuscous. Tegmina dark sepia marbled with transverse veins and parts of longitudinal veins emerald and pallid green. Wings fuscous.

One female, **1,000 m., Suisapa, Lichuan District, W. Hupeh, China,** Aug. 21, 1948, Gressitt.

In Melichar's key to Thioniinae (1903:254) this species runs to "7," but it differs from both alternatives; from *Flavina* Stål in the form of the head and in the number of post-tibial spines, and from *Cameruniella* Hagl. in tegminal and wing venation. If *Flavina* ? *striata* Dist. belongs in this genus, it is separated from *T. polyphemus* by coloration, especially of the frons.

Genus **Tetrica** Stål

Stål, 1866:208. Logotype, *Tetrica fusca* Stål, 1870:757

It appears likely that this genus, as currently recognized, is composite

or contains groups of species which might be recognized as distinct subgenera: it is also possible that species have been assigned to *Sarima* Mel. by their authors because they did not agree with their interpretation of *Tetrica*. Melichar's concept of *Sarima* is restricted to species in which the two veins which adjoin the first fold of the wings are fused together distally to form a single stout rod. On account of this restriction the following two species fall into the looser concept of *Tetrica* Stål.

Tetrica zephyrus Fennah, new species.
(Figure 24, A–D.)

Female: length, 5.5 mm.; tegmen, 6.0 mm.

Lateral margins of frons evenly incurved distally through less than 90°. Rostrum with apical segment markedly expanding distally in anterior view, at apex twice as wide as at base of subapical segment. Post-tibiae laterally bispinose, apically 7-spined: basal metatarsal segment with 9 spines. Tegmina with Sc reaching to middle of costal margin, of subequal prominence throughout.

Testaceous; a suffusion anteriorly on vertex, over frons except in basal fifth and clypeus except at sides, genae before eyes and abdominal ventrites fuscous, a narrow band across base of frons, excluding transverse carinae,

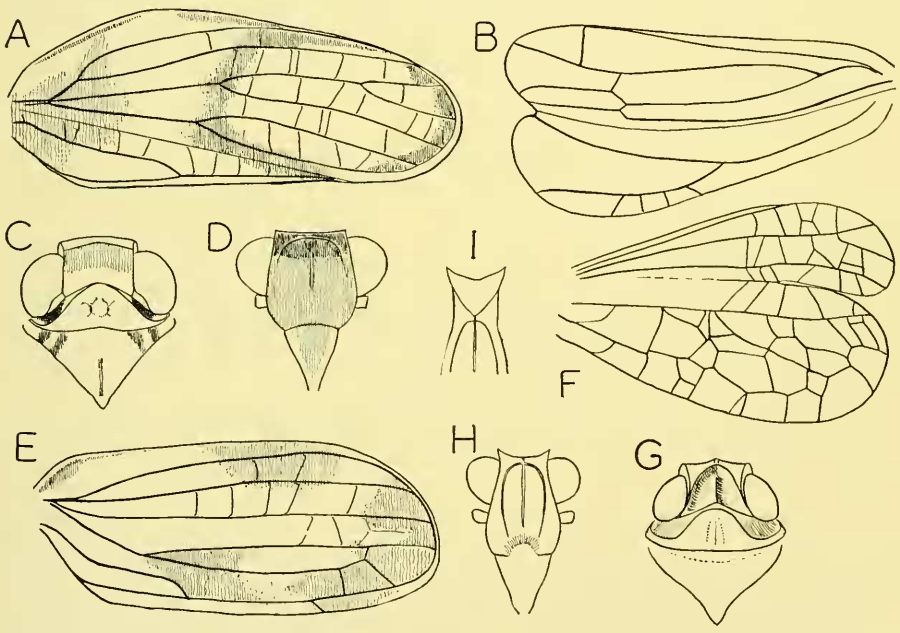


Fig. 24. *Tetrica zephyrus*, new species: A, tegmen; B, wing; C, head and thorax; D, frons and clypeus. *Neodurium postfasciatum*, new species: E, tegmen; F, wing; G, head and thorax; H, frons and clypeus; I, apex of vertex, anterodorsal view.

a spot anterolaterally on pronotum underlying basal surface of head, two bands near each side of mesonotum, and tibiae at apex, fuscous-piceous.

Tegmina greyish-translucent, a diffuse fascia from base of clavus across humeral eminence to costal margin, an irregular and interrupted V-shaped suffusion from apex of clavus to fork of Cu, thence obliquely to costal margin near node, brown; intervenal submarginal areas of costa and apex dark fuscous. Wings fuscous.

Deflexed part of anal segment of female about 5 times as long as broad. Ovipositor with third valvulae triangular, castaneous, polished, narrowly membranous at tip, which is subacute.

Two females (one the type), **Mokansan, Che-Kiang Province, China,** Aug. 24, 1927, Mrs. D. E. Wright. This species differs from *T. aequa* Jac. in coloration and from *S. bimaculata* Mel. and *S. clathrata* Mel. in the position of the union of the frontal carinae, and in the color and pattern of the tegminal markings, from *S. amagisana* Mel. in coloring of frontal carinae and tegmina, and from *S. sinensis* (Wlk.) in the much less angulate anterior margin of the vertex.

It is just possible that it may prove to be a geographical subspecies of *Sarima nigrifacies* Jac., though it differs substantially from the described coloration, while it cannot be assumed that the species are congeneric. The decision to erect a new species, based only on female material, was taken by the writer after he had satisfied himself that the nuances of shape of the head and its carinae, and of the tegmina and their venation furnish adequate means of specific recognition.

Genus **Caliscelis** Laporte

De Laporte, 1833:251. Haplotype, *Fulgora bonelli* Latr., 1807:166

Caliscelis chinensis Mel.

Melichar, 1906:16.

Post-tibiae laterally with 1 spine; apically with 7 short stout spines. Basal metatarsal segment 2-spined.

Ovipositor with third valvulae thickened and slightly tumid on hind margin near base.

One female, Tunglu, Che Kiang Province, China, Sept. 10, 1926, Mrs. D. E. Wright.

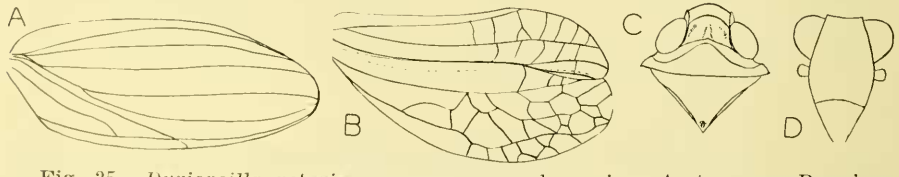


Fig. 25. *Duriopsilla retarius*, new genus and species: A, tegmen; B, wing; C, head and thorax; D, frons and clypeus.

Family **FLATIDAE** Spinola

KEY TO GENERA OF CHINESE FLATIDAE

(1) (2) Tegmina in respose steeply tectiform, their apical margins more or less contiguous throughout ..... (3)

(2) (1) Tegmina very shallowly tectiform, almost horizontal, in repose, their apical margins not contiguous. Post-tibiae with one spine laterally..... ..... *Atracis* Mel.

(3) (4) Antennae relatively elongate, basal segment at least three times as long as broad. Post-tibiae six-spined at apex, basal metatarsal segment with four spines at apex. Species large..... *Cerynia* Stål

(4) (3) Antennae short, not as above..... (5)

(5) (6) Tegmina with costal margin curving obtusely into apical margin, apex of clavus reaching to anal angle, or practically so..... (7)

(6) (5) Tegmina not as above, apical angle well defined, or if not then more or less symmetrical with anal angle..... (9)

(7) (8) Tegmina with anal angle acute and produced..... *Mimophantia* Mats.

(8) (7) Tegmina with anal angle obtusely rounded, not produced..... ..... *Microflata* Mel.

(9) (10) Tegmina distinctly constricted between node and claval apex, apical margin rounded..... *Seliza* Stål

(10) (9) Tegmina not constricted as above..... (11)

(11) (12) Tegmina with apical cells short, devoid of a distinct even line of transverse veinlets ..... (13)

(12) (11) Tegmina with apical cells not short, at least one even and distinct transverse line..... *Phylliana* Merc.

(13) (14) Vertex conically produced. Anal angle of tegmina acute..... (15)

(14) (13) Vertex obtusely rounded. Anal angle of tegmina subrectangulate, costal cell reticulate ..... *Geisha* Kirk.

(15) (16) Costal cell of tegmina densely reticulate. Vertex medially carinate..... ..... *Phyllyphanta* A. & S.

(16) (15) Costal membrane traversed by regularly spaced subparallel veinlets. Vertex not medially carinate ..... *Salurnis* Stål

Genus **Mimophantia** Matsumura

Matsumura, 1900:212. Haplotype, *Mimophantia maritima* Mats.

Mimophantia maritima Mats.

Matsumura, 1900:212.

Third valvulae of ovipositor with 5 teeth on outer margin and one tooth on upper. Post-tibiae 2-spined laterally, 8-spined at apex, basal metatarsal segment with about 20 spines.

Four males and 9 females, Mokansan, Che Kiang Province, China, Sept. 10, 16, 18, 1927, Mrs. D. E. Wright.

Genus **Microflata** Melichar

Melichar, 1902:9. Haplotype, *Microflata stictica* Mel.

Microflata stictica sinensis Fennah, new subspecies.
(Figure 26, A–C.)
Melichar, 1902:10.

Width of vertex at level of anterior margin of eye slightly exceeding length in middle line, apical margin obtusely convex.

Tegmina with corium testaceous, translucent, distal main veins and area between hind claval vein and margin fuscous. Lateral margins of seventh and eighth abdominal segments piceous.

One female, Loh-Fau Shan, Poh-lo District, Kwang Tung, China, April 6–8, 1934. In the typical subspecies the length of the vertex slightly exceeds its width at the level of the anterior margin of the eyes, while the anterior margin is subacutely convex; a broad shallow ridge lies along the middle line from apex to base, whereas on the frons the median carina does not extend distad of the middle. In the present subspecies there is no definite median ridge on the vertex, while the median carina of the frons can be traced almost to the fronto-clypeal suture.

Genus **Salurnis** Stål

Stål, 1870:773. Type, *Ricania marginella* Guérin-Méneville

Salurnis marginellus (Guér.).
Ricania marginella Guérin-Méneville 1834:467

Post-tibiae unispinose laterally, apically 8-spined, basal metatarsal segment 12-spined.

One male and 2 females, Chang-Tau-Ching, 800–1,000 ft., Szechwan, China, Gressitt, July 18, 1948; 1 female, Sang-Hou-Ken, Hupeh-Sze border, China, July 19, 1948.

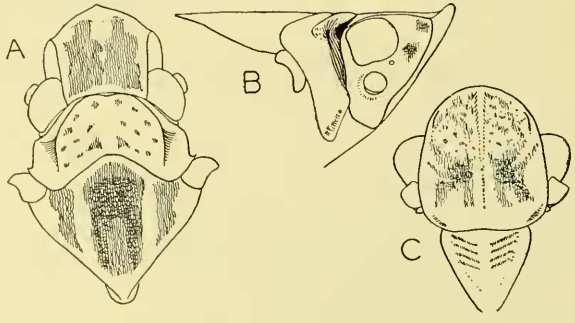


Fig. 26. *Microflata stictica sinensis*, new species: A, head and thorax; B, ditto, side view; C, frons and clypeus.

Genus **Geisha** Kirkaldy

Kirkaldy, 1900:296. Type, *Poeciloptera distinctissima* Wlk.

Geisha distinctissima (Wlk.).

Poeciloptera distinctissima Walker, 1858:114.

Post-tibiae laterally bispinose, apically 7-spined, basal metatarsal segment 8-spined.

Two females, 1,000 m., Suisapa, Lichuan District, W. Hupeh, China, July 25, 1948, Gressitt; 1 male, Tokyo, Japan, July, 1900, Kuwana; one female, Chizuka, Okinawa, July–Sept., 1945, Bohart and Harnage, is provisionally placed here.

Genus **Phylliana** Metcalf

Metcalf, 1952:227. Logotype, *Mesophylla inclinata* Mel., 1902:53

Two females, Kwanhaien, Che Kiang Province, China, Aug. 2, 1928, H. S. Parish, are referred to this genus but do not agree with any species so far described. They may be related to *M. alba* Jac. from Luzon.

Genus **Cerynia** Stål

Stål, 1866:235. Type, *Flata albata* Stål, 1854:247

Cerynia maria rosea Mel.

Poeciloptera maria White, 1846:25, pl. 1, fig. 3, var. *rosea* Melichar, 1901:220.

One male, Lung Tau Shan, N. Kwangtung, China, June 11, 1947, Gressitt.

Genus **Seliza** Stål

Stål, 1862:303. Orthotype, *Poeciloptera vidua* Stål, 1854:248

Seliza ferruginea lignaria (Wlk.).

Elidiptera ferruginea Walker, 1851:333.

Flatoides lignarius Walker, 1851:413.

Post-tibiae 2-spined, 6-spined at apex, basal metatarsal segment 7-spined.

One male, Lung Tau Shan, N. Kwangtung, China, July 11, 1947, Gressitt. Until a critical study of this genus can be made, the writer believes the above to represent the most satisfactory taxonomic assignment of the populations of this species found in Hong Kong and Kwangtung.

Family **NOGODINIDAE** Muir

Genus **Pisacha** Distant

Distant, 1906:391. Orthotype, *Pisacha naga* Distant

Pisacha naga Distant

Distant, 1906:392.

One female, Nai-suen, 21 m. northeast of Naam-fung, Lin-kao District, Hainan Island, Sept. 1, 2, 1932.

Genus **Mindura** Stål

Stål, 1862:69. Orthotype, *Flata obscura* F., 1803:49

Mindura sundana Kirkaldy.

Mindura sundana Kirkaldy, 1909:32.
Mindura fuscata Melichar, 1898:212.

Rostrum surpassing post-trochanters. Post-tibiae laterally 4-spined, apically 9-toothed; basal metatarsal segment with two prominent outer teeth and 11 small teeth between them. Ovipositor with third valvulae distally heavily callused, each with about 15 minute teeth on inner face just basad of thickened area; a prominent membranous triangular lip projecting at apex.

One female, Chizuka, Okinawa, July–Sept., 1945, C. E. Bohart and C. L. H. Harnage.

Family **LOPHOPIDAE** Stål

KEY TO GENERA OF CHINESE LOPHOPIDAE

(1) (2) Post-tibiae at apex with a pad of fused spines separated only at their tips ..... (3)

(2) (1) Post-tibiae at apex with large spines, sublinear or irregular; median disc of frons without a median carina; in profile vertex meeting frons acutely ..... *Bisma* Dist.

(3) (4) Basal joint of metatarsus inflated, with its lower surface covered with a felt of minute setae ..... (5)

(4) (3) Basal joint of metatarsus narrow with a pad of spines on its distal edge ..... (7)

(5) (6) Vertex longer than broad, base of median disc of frons in anterior view extending dorsad beyond remainder of frons, no part of frons visible in anterior view between median disc and eyes; tegmina with sutural angle acute ..... *Lophops* Spin.

(6) (5) Vertex broader than long, base of median frontal disc not surpassing basal margin of frons, median disc not occupying whole width of frons; tegmina with sutural angle obtusely rounded ..... *Lacusa* Stål

(7) (8) Second post-tarsal segment as large as basal segment; apical margin of tegmina convex, protibiae flattened but not dilated ..... *Pitambara* Dist.

(8) (7) Second post-tarsal segment much smaller than basal; apical margin of tegmina more or less straight and oblique; protibiae greatly dilated ..... *Elasmoscelis* Spin.

Genus **Lophops** Spinola

Spinola, 1839:387. Orthotype, *Lophops servillei* Spin.

Lophops carinata (Kirby).

Brixioides carinatus Kirby, 1891:140.

One male and one female, Sam-ah-Kong, Yei-hsien District, Hainan Island, S. China, Jan. 24–26, Feb. 1, 1935; one female, Big Pool, 2,800 ft., Loh Fau Shan, Kwangtung, S. China, Oct. 11, 1935, E. R. Tinkham.

Genus **Lacusa** Stål

Stål, 1862:309. Haplotype, *Lacusa fuscofasciata* Stål

Lacusa fuscofasciata (Stål).

Elasmoscelis ? fuscofasciata Stål, 1854:248.

One female, between Cheung-kou-ts'uen and Tai-pin-ts'uen, Kuing-shan District, Hainan Island, S. China, July 19, 1935; one female, Lung-Tau Shan, N. Kwangtung, June 11, 1947, Gressitt.

Genus **Elasmoscelis** Spinola

Spinola, 1839:388. Orthotype, *Elasmoscelis cimicoides* Spinola, 1839:388

Elasmoscelis perforata Walker.

One male and 1 female, Tokao, Japan, Oct., 1907, H. Salter; 1 female, Taipingfu, Sung-shan District, Kwangsi, S. China, Aug. 5–6, 1934, E. R. Tinkham; 1 female, Nai-Suen, 21 m. southeast of Naam-fung, Lin-kao District, Hainan Island, Sept. 10–12, 1932.

Family **RICANIIDAE** Stål

Genus **Ricania** Germar

Germar, 1818:221. Logotype *Cercopis fenestrata* Fabricius, 1775:688

= *Flata hyalina* F.

Ricania speculum (Walker).

Flatoides speculum Walker, 1851:406.

In the series examined the markings on the tegmina were comparatively uniform. One male, Sang-Hou-ken, Hupeh-Sze border, July 19, 1948, Gressitt; 6 males and 4 females, 800–1,000 ft., Chang-Tau-Ching, Szechwan, July 18, 1948, Gressitt.

Genus **Pochazia** Amyot & Serville

Amyot and Serville, 1843:528. Logotype, *Flata fasciata* Fabricius, 1803:47

Pochazia fuscata (F.).

Cicada fuscata Fabricius, 1794:28.

Two males and 2 females, Taihanroku, Japan, June 30, 1908, H. Salter, belong to the geographical subspecies *albomaculata* Uhler.

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